

ASSESSMENT OF PROGRAMME QUALITY OF COMMUNITY MANAGEMENT OF ACUTE MALNUTRITION (CMAM) IN MAIHA LOCAL GOVERNMENT AREA, ADAMAWA STATE, NIGERIA

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ABSTRACT

Background: Community management of acute malnutrition (CMAM) programme was initiated to increase the number of children to be treated of severe acute malnutrition (SAM) without being admitted to the health facility and to reduce cost.

Objective: The study assessed the programme quality (facility quality and performance indicators) of CMAM in Maiha Local Government Area (LGA) of Adamawa State.

Methods: The five Out-patient therapeutic (OTP) centers in Maiha LGA were assessed in the month of August, 2018. Self-administered OTP observational checklists based on the national guidelines of CMAM evaluation checklists were used to elicit information from the officers in - charge of each OTP center. Variables observed for facility quality included facility layout and flow of activities, protocol adherence, reporting and documentation and Stock of drugs / essentials. Records from CMAM registers of each center were used to evaluate their performance indicators (admission list, cure rates, death rates, default rates and non-recovery rates). Simple percentages were used to assess their level of performance quality which was compared with the National standards. Sphere standards of nutrition programming were used to assess the performance indicators.

Results: Results showed that all the centers scored from 77.27 – 90.91% on facility layout and flow of activities. On protocol adherence, all the centers scored from 41.67 – 54.17%, while reporting and documentation revealed 50 - 80% across the facilities. Stock of drugs and essentials in all the facilities recorded 33.33 – 66.67%. Overall performance of the centers lies from 59.68 to 69.35%. There is significant difference between the performance of Jamtari center and all other centers. Total facility scores lie between 59.58 and 69.35%. The performance indicators revealed that admission lists of the centers were from 243 to 520 patients; cure rate of 85.50 -96 .92%; death rate of 0.19– 2.04 % and default rate of 2.69 – 4.53% across the centers.

Conclusion: Minimum sphere standards of nutrition programming were achieved in all the centers. However out of stock of Ready to - use- therapeutic foods a core component of CMAM in some of the health facilities demands that government should include RUTF in the essential drugs lists of the state to increase the quality of CMAM programme in the affected communities.

Key words: CMAM, performance indicators, performance quality, Minimum sphere standards, RUTF.

INTRODUCTION

Severe Acute Malnutrition (SAM) is defined globally as a very low weight for height (below -3z scores of the median World Health Organization (WHO) growth standards, or below 70% of the median of National Centre for Health Statistics standard) and by the presence of nutritional oedema (1). In children 6–59 months of age, a middle upper arm circumference (MUAC) less than 11.5 cm is also indicative of SAM (1). Treatment of SAM had been restricted to facility-based approaches, greatly limiting its coverage and impact. However, evidence from emergency programmes suggested that large numbers of SAM cases could be treated in their communities without being admitted to a health facility or a therapeutic feeding unit (2). The community management of acute

malnutrition (CMAM) has gained widespread acceptance in the humanitarian sector following the joint UNICEF WHO statement in June 2007 and is now the preferred model for SAM treatment in emergency and non-emergency contexts (1). CMAM is a decentralized community-based approach to treating acute malnutrition. Treatment is matched to the nutritional and clinical needs of the child, with majority of the children receiving treatment at home using ready-to-use foods. In-patient care is provided only for complicated cases of acute malnutrition. CMAM consists of four components: (a) stabilization care for acute malnutrition with complications, (b) out-patient therapeutic care (OTP) for severe acute malnutrition without complications, (c) supplementary feeding for moderate acute

malnutrition and (d) community mobilization. CMAM is the globally endorsed approach for treatment of acute malnutrition. The purpose of CMAM is to ensure that acutely malnourished children are treated effectively and in a timely manner, thereby reducing the risk of morbidity and mortality. A child with severe acute malnutrition (SAM) is nine times more likely to die than a healthy child (3). Using the CMAM approach, most children (>85%) with acute malnutrition can receive treatment at home, with weekly visits to a local health centre, making healthcare much more accessible than compared to traditional feeding centers (3).

CMAM was introduced in Nigeria at the end of 2009, through a pilot programme implemented by two state governments (Gombe and Kebbi) in six local government areas with technical support from VALID International and UNICEF (1). From the start, the CMAM programme in Nigeria aimed to explore and evaluate different approaches to integrate CMAM into routine health services in a sustainable manner across Northern Nigeria (4). With this in mind, CMAM was promptly introduced into broader programmes. The principles of CMAM according to the national guidelines include: access and coverage, timeliness, appropriateness and care as long as needed (1). The integration of CMAM in routine health care services packages ensures that the OTP services will be available to the communities as long as malnutrition remains a problem. It is necessary to evaluate the CMAM programmes in Maiha LGA as the level of malnutrition in this area is constantly high as reported by (5). The quality and effectiveness of CMAM services depends on a number of factors. On the health systems side, there is need of enabling policy environment; sustained financing; a competent and responsive workforce; consistent stock of equipment; timely availability of supplies; supportive environment in which quality services are delivered; and information management systems to monitor implementation and make course correction where needed (6). Additionally, the community component should be strong enough to mobilize, screen, refer, and follow up cases, in addition to providing nutrition education and counseling and other activities aimed at managing and preventing malnutrition. To utilize services, people need to have physical access to the health centers, be motivated enough to go to the first visit, continue to go to subsequent visits, and follow the regimen at home until the person has been discharged. Performance and quality of CMAM services could be assessed using two parameters (2).

A. Programme quality which include adherence to treatment protocols, human resources, access services / geographical coverage; effectiveness of treatment

and integration into health system. B. Programme performance indicators which could be accessed through analysis of effectiveness of treatment (rates of recovery, death, default and non-recovery) as well as treatment coverage and use of services.

In the last few years anecdotal evidence suggests there are numerous challenges to the successful implementation of quality CMAM programming particularly in the North-East of Nigeria (Maiha LGA in Adamawa state inclusive) due to persistent insurgency. There could be constraints in the implementation of the CMAM programmes. Thus, this study aims to evaluate CMAM programme quality and performance indicators across Adamawa State with Maiha LGA as a case study. The findings of this study will be used by stakeholders for strengthening exiting programmes, to promote good practices in implementation of CMAM programming and intervention in areas in need.

METHODOLOGY

Research Design

A descriptive research design was used for the study to assess the quality of CMAM programme in Maiha LGA of Adamawa State.

Study Area

Maiha is a Local Government Area council of Adamawa State in the Northern Senatorial Zone (5), headed by executive chairman. It has seventy two wards headed by appointed councilors. Maiha LGA has five CMAM health facilities located in strategic wards across the LGA namely Mayonguli, Sarou B, Jamtari, Manjekin and Konkol health centers.

Scope of the study

The study covered the CMAM programme in Outpatient treatment (OTP) centers for SAM cases without medical complications in Maiha Local Government area of Adamawa State. The study concentrated on the assessment of facility structures and conducts of programme activities. The assessment was done in the month of August, 2018.

Ethical Consideration

An introductory letter from the State Primary Health Care Agency was obtained after explaining the nature and objectives of the research, to enable the researcher gain easy access into the health facilities. Verbal consent of the in-charges of the facilities were got before the questionnaires were administered, after assuring them that the result of the study will not have any personal implication. Anonymity and confidentiality were ensured to the officers in-charges to enable them give unbiased reports.

Sample / Sampling Technique

All the five facilities implementing CMAM programme in Maiha LGA were used for programme evaluation. The centers include Mayo Nguli, Manjekin, Sarou B, Jamtari and Konkol Primary Health Facilities.

Instrument for Data Collection

Self administered questionnaires developed from national CMAM Observational Checklist were used by the researcher in generating relevant data from the officers in – charge of each center, The questions were based on the research topic. Sphere standards of nutrition programming were used to assess the performance indicators. Data for performance indicators were elicited from the official registers of the centers by the researcher

Data collection

The researcher administered the questionnaires on facility quality to the officer's in-charge of each center and collected the data for performance indicators from the registers of the centers.

Facility quality.

Variables evaluated for facility quality data were,

- A. facility layout/flow of activities 22 points,
- B. protocol adherence 24 points,
- C. reporting and documentation 10 points,
- D. stocks of drugs and essentials 6 points.

Scoring for facility quality was based on 3 factors namely, Yes completely = 2 points; partly = 1 point; No not at all = 0 point. Total points = 62 points for 100%.

The following checklist was used for facility quality data collection.

A: FACILITY LAYOUT/FLOW OF ACTIVITIES: 22 POINTS

- Sheds are adequate and protect against environmental elements
- washing facility with soap is available
- Arrangement for crowd control made, Consultation and RUTF distribution points are adjacent
- Well protected disinfected water for drinks is available
- Quiet and comfortable place for RUTF appetite test arranged
- All Anthropometric measurements are done in same place.
- Adequate and clean weighing pants available
- Arrangement of site allows for easy flow of activities as specified in steps for management of the OTP
- Benches/chairs are provided for officer/staff and client
- Staffing is adequate for site

- OTP quick reference and drug guidelines available in the OTP site

B: PROTOCOL ADHERENCE: 24 POINTS

- Anthropometric (MAUC, weigh etc.) measurements are correctly done
- Health and Nutrition Education done regularly
- Specific IYCF key messages are passed during OTP days
- Key messages given to caretakers during admission and follow ups
- 10% sugar water readily available and given for children awaiting treatment
- Triage of more sick children done
- Criteria for recommending home visits followed strictly and all children who need visits identified and recorded
- Referral criteria to SC followed
- Enrolment and discharge criteria are strictly followed
- Appetite test is properly conducted with provision of soap, water for washing, clean water for drinking
- Prescription and dispense of drugs done according to protocol
- Physical examination consultation is appropriately done (temperature taken with thermometer)

C: REPORTING AND DOCUMENTATION: 10 POINTS

- All required entries are filled on forms, cards and registers
- RUTF stock cards are up-to-date
- Drug tally sheets are properly used
- Up-to-date copies of monthly statistics are available in the facility
- Standard tools are used for documentation

D: STOCK OF DRUGS AND ESSENTIALS: 6 POINTS

- Availability of routine drugs in stock and consistency in supply
- Availability of RUTF in stock and consistency in supply
- Availability of data tools

$$\text{Facility quality} = \frac{\text{facility scores of variables}}{\text{Total scores}} \times 100$$

Performance Indicators

Performance indicators were based on the discharge outcomes(Discharges from a CMAM programme are those no longer registered made up of those who are cured, non- recovered, defaulted and died) (7). The performance indicators collected from the registers of the centers included, total number of admission for the month, number cured, deaths and defaulters. The cure,

death, defaulter and non recovery rates were calculated and compared with the standard (8). The international standards used were: cured = > 75%; default = < 15%; died < 10%; non recovered = no standard) (1). The data was collected with the following calculations

$$\text{Cured rates} = \frac{\text{Number of children cured} \times 100}{\text{Total number of discharges}} \quad \text{Sphere standard} = > 75\%$$

$$\text{Death rates} = \frac{\text{Number of children Dead}}{\text{Total number of discharges}} \times 100 \quad \text{Sphere standard} = < 10\%$$

$$\text{Defaulter rates} = \frac{\text{Number of children defaulted}}{\text{Total number of discharges}} \times 100 \quad \text{Sphere standard} = < 15\%$$

$$\text{Non - recovery rates} = \frac{\text{Number of children non- recovered}}{\text{Total number of discharges}} \times 100$$

set standards

DATA ANALYSIS

Data collected from the respondents were analyzed using simple percentages and compared with the National and SPHERE standards.

RESULTS

Table 1 shows the facility scores and percentages of the supervision variables of the OTP centers. On facility layout and activities, all the centers scored over 70%. On protocol and adherence, all the centers scored between 41.67 – 54.17%, reporting and documentation 50 - 80%. Stock of drugs and essentials 33.33 -66%.

Table 1: Facility scores and percentages of the supervision variables of the OTP centers.

Variables	Facility Layout&flow of activities 2 2 (%)	Protocol Adherence 2 4 (%)	Reporting & Documentation 1 0 (%)	Stock of drugs &essentials 6 (%)	Total scores 6 2 (100 %)
OTPs Centers					
Mayonguli	1 7 (7 7 . 2 7)	1 3 (5 4 . 1 7)	7 (7 0)	4 (6 6 . 6 7)	4 1 (6 6 . 1 2)
Sarou B	1 7 (7 7 . 2 7)	1 3 (5 4 . 1 7)	5 (5 0)	4 (6 6 . 6 7 %)	3 9 (6 2 . 9 0)
J a m t a r i	1 7 (7 7 . 2 7)	1 0 (4 1 . 6 7)	7 (7 0)	3 (3 3 . 3 3)	3 7 (5 9 . 6 8)
M a n j e k i n	1 8 (8 1 . 8 2)	1 3 (5 4 . 1 7)	6 (6 0)	4 (6 6 . 0 0)	4 1 (6 6 . 1 2)
K o n k o l	2 0 (9 0 . 9 1)	1 2 (5 0)	8 (8 0)	3 (3 3 . 3 3)	4 3 (6 9 . 3 5)
MEANS%	8 0 . 9 1	5 0 . 8 4 %	6 6 %	5 3 . 2 %	6 4 . 8 3 %

Score keys

Total scores 62 points (100%);
 < 50% poor; 50 – 60% fair; 61 - 65% good; 66 – 69% very good; > 70% excellent

Table 2 shows the performance indicators of OTP centers in Maiha LGA; admission lists of the centers were from 243 – 520patients; cured rates of 85.50 -

96 .92%; death rates of 0.19 – 2.04 % and defaulter rates of 2.69 – 4.53% across the centers.

Table2: Performance indicators of CMAM programme in the OTP centers in Maiha LGA (August 2018)

OTP centers	Admission	cured	Death	Defaulter	Non- recovered	Cure rate %	Death rate %	Defaulter rate %	Non- recovery rate %
Mayo nguli	3 4 3	3 0 7 7	1	3 1	6	89.50	2 . 0 4	3 . 7 9	4 . 6 6
Sarou B	5 2 0	5 0 4 1	1	4 1		96.92	0 . 1 9	2 . 6 9	0 . 1 9
J a m t a r i	4 0 2	3 6 3 5	1	7 1	7	90.30	1 . 2 4	4 . 2 3	4 . 2 3
M a n j e k i n	2 4 3	2 2 4 4	1	1 4		92.18	1 . 6 5	4 . 5 3	1 . 6 5
K o n k o l	3 5 2	3 2 9 5	1	2 6		93.47	1 . 4 2	3 . 4 1	1 . 7 0
LGA total	1 8 6 0	1 7 2 7 2	2 2	6 7 4	4	92.84	1 . 1 8	3 . 6 0	2 . 3 7
SPHERE STD						> 7 5	< 1 0	< 1 5	N O S T D

DISCUSSION

Facility Layout/Flow of Activities

The high level of facilities layout available in all the centers (77.27 – 90.91%) indicated the attention of the government in providing CMAM structures to the Northeast due to the persistent insurgency and its attendant increase in level of malnutrition in this area. The CMAM approach helps to identify and initiate treatment by referring children with acute malnutrition before they become seriously ill (9), the government provides the facilities in the communities as shown in this study.

Protocol adherences

Protocol adherence was not well attended to as all the centers scored less than 60% across board; this probably was due to the quality of staff and geographical nature of the centers which might cause qualified staff to be reluctant in serving in the centers. Maiha LGA is a rural community. Challenges of clients coming from distant locations in turn increases programme defaulting rate over time(10). Jamtari center is the worst hit on protocol adherence (41.67%) rated poor and this must be related to the quality of staff available in the center. As shortage of trained health workers often lead to breach of protocols(11).

Reporting and Documentation

Most of the centers scored high marks in reporting and documentation (70%,70%, 80%), though Sarou B and Manjekin scored 50% and 60% respectively rated fair. The high level of reporting and documentation must be connected with the fact that reporting and documentation attracts fresh supplies to the centers, so officers in-charge would like to make quick reports (1). Also report from individual facilities operating within the LGA are examined and collated to produce a compilation report for the LGA by the Nutrition focal person (11) and forwarded to the state nutrition officer at state level so the officers in- charge are obliged to comply promptly, similar report was also given by the Adamawa state epidemiological report of week 17, 2018 (16).

Stock of drugs and essentials

The scores in all the centers for drugs and essentials especially Jamtari and Konkol centers scoring 33.33% each showed that the major component of CMAM in the local government is not attended to, this might be due to donor fatigue on the part of the NGO supplying RUTF and also the government not being sensitive to the needs of the centers. All of the five health facilities reported the challenge of the RUTF shortage.

Performance Indicators

Generally, all the centers met the minimum SHERE standard of all the performance indicators. All centers were within the acceptable minimum standards for food security and nutrition, which is >75% as cured rate, <10% as death rate and <15% as default rate (1).

Admissions

Large number of children admitted (243 – 520) in each center supported the fact that large number of children can be treated in their communities without being admitted to a health facility (10). As a result many countries are embracing community approach to management of SAM as a key strategy in the drive towards the attainment of MDG4 (12).

Cured rates.

The highest cured rate (96.92%) recorded in Soura B center is connected to their high performance in all the parameters assessed for facility performance. Soura B also had best non - recovered mark (1, (0.19%)) because if services are properly followed non recovery should be almost zero as documented by(13). Konkol center had the highest point in facility and flow of activities but still failed to score highest in cure rate probably because of lack of drugs and essentials in the center (33.33%, Table 1). It has been recorded that children (>85%) with acute malnutrition can receive treatment at home, with weekly visits to a local health centre, making care much more accessible than compared to traditional feeding centers (14). The result of this study is in line with this as all the centers recorded >85% cure rate.

Defaulter rates.

Sarou B center having the lowest defaulter rate shows that the facility is accessible to the people, this also reflected on the highest number of patients admitted by this center(Table 2).Defaulter rates can be high when the programme is not accessible to the population or due to conflict or lack of security(15). Jamtari center having the highest number of defaulters might be connected to their very low protocol adherence point (41.67%) and lack of drugs and essentials (33.33%) forcing the patients to stop attending the clinics. All defaults could be potential deaths so there is need for their follow up as documented by (11)

Death rates

Sarou B having the highest number of admission of patients but the lowest death rate and highest cure rate might be related to its good points on stock of drugs and essentials (66.67%) which are used on the patients. Highest death rate and high default rate recorded in Mayonguli demands that attention should be concentrated to this center as all defaulters could be potential deaths so the need to be followed up as is demanded in the national guidelines (1, 11).

Non recovered and non - recovery rates.

Jamtari center having the highest number of non-recovered(17(4.23%)) might be attributed to their very low protocol and adherence points (41.67%) as well as lack of drugs and essentials / RUTF(33.33%). Mayonguli having the highest death rate(2.04%) and

non- recovery rate (4.66%) in spite of their high facility scores demands that careful investigation into both the services provided and the environment (disease outbreaks, food insecurity etc) should be done. This is because the guidelines (1) reported that if proper care protocols are observed non- recovered should be almost impossible. All non- recovered cases must be investigated as demanded by the guidelines.

CONCLUSION

Based on the results of this work the CMAM programme facilities in Maiha LGA of Adamawa state met the international standard of CMAM programme quality. However, out of stock of Ready to - use-therapeutic foods and essentials a core component of CMAM in some of the health facilities demands that government should include RUTF in the essential drugs list of the state to increase the quality of CMAM programme in the affected communities. Coverage estimates should also be carried out to confirm that those needing treatment are actually getting treatment. Studies are ongoing by the researchers to this effect.

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