



Process Evaluation of the Outpatient Therapeutic Program: The case of Health Posts in Konso Special Woreda, Southern Ethiopia, 2018

Evaluation Thesis to be submitted to:

Jimma University, Institute of Health, Public Health Faculty, Department of Health Economics, Management and Policy, Health Monitoring and Evaluation Post Graduate unit for Partial Fulfillment of the Degree of Master of Sciences in Health Monitoring and Evaluation.

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Declaration

I, the undersigned, declare that this thesis finding is my original work, has not been presented for a degree in this or any other university and that all sources of materials used for the thesis have been fully acknowledged.

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This thesis has been declared for final submission with my approval as a university internal, external examiners and advisors.

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Abstract

Background: Severe acute malnutrition is a major cause of morbidity and mortality in children under five years of age worldwide. It is underline cause for 540,000 under-five deaths can be attributed to acute malnutrition each year globally. In Ethiopia, there were 303,000 children who require treatment for severe acute malnutrition as of 2017. To decrease under five morbidity and mortality related to acute malnutrition, health posts in Ethiopia are implementing the outpatient therapeutic program, where process evaluation was not conducted in the study area. The aim of this evaluation was, therefore, to assess availability, compliance, acceptability and related factors that affect implementation of Outpatient therapeutic program.

Objective of the evaluation: to assess the process of implementation of outpatient therapeutic program at health posts of Konso Special Woreda by 2018.

Methods and Materials: Facility based case study design was conducted from March, 19-April, 20, 2018. The focus of the evaluation was process evaluation with formative evaluation approach based on Donabedian's structure-process-outcome model using both quantitative and qualitative methods. For quantitative study, a total of 411 caregivers were interviewed, and 20 registration book records, resource inventory and supportive supervisions documents were reviewed. For qualitative data, twenty in-depth interviews and eighty direct observation sessions conducted with health extension workers and five Key informant interview with Woreda health office head and head of health centers to assess constraints in implementation. Availability, compliance and acceptability were dimensions of the evaluation. For Quantitative data, Epi-data version 3.1 and SPSS version 20 software was used for data entry and analysis. Qualitative data were transcribed, summarized and analyzed thematically. Caregivers, health posts and Outpatient therapeutic program of Konso Special Woreda were the primary, secondary and final units of analysis.

Results: The achievement level of availability dimension was judged to be good. However, none of the health posts assessed had reporting formats, incinerator and Zinc sulphate. Three fourth of health posts hadn't have oral rehydration salt, 70% of health posts didn't have Amoxicillin tables, 45% of health posts hadn't have tape water and Moreover, 25% of health posts did not have sanitation facilities, safety box and amoxicillin syrup. But, store room, guideline, client latrine, registration books, plumpyNut, measuring tape, weight scale and daily nutrition services were available.

The achievement level of compliance dimension was judged good. But, more than fifty percent of children not checked for general danger signs, 37(46%) of children not correctly classified for malnutrition and only 43(53.75%) correctly treated for malnutrition. The overall acceptability dimension was judged as good. More than half (55%) of client were very satisfied or satisfied on the acute malnutrition service received. Nearly 50% of caregivers of the study travelled greater than 30 minutes to get service. Moreover, 180(78%) of caregivers were satisfied with the availability of services, health extension workers and appropriateness of therapy prescribed. The majority, 345(84%) of caregivers were dissatisfied with the convenience of working hour of acute malnutrition at the next appointment. Client satisfaction was found to be associated with household income (AOR=4.1, 95%CI=2.81-10)(P=0.002), educational status (AOR=0.26, 95%CI=0.109-0.638)(P=0.003) and distance travelled (AOR=2.73, 95% CI=2.15-4.84)(P=0.001) were the factors which determine client satisfaction.

Conclusion and recommendations: overall implementation status was good that major areas in the implementation needs to be revised and modified, Even if it was good, we can achieve more by availing resources, provide refresher training and supportive supervision. We recommend more efforts to be exerted on improvement of provider's compliance and availing all necessary resources to the status of outpatient therapeutic program.

Keywords – availability, compliance; acceptability, satisfaction, outpatient therapeutic program, Konso Special Woreda.

Acknowledgement

First and for most I would to thank the almighty God for supporting me with everything. My deepest gratitude goes to my advisors for their guidance and support from the inception of the title and for the continuous advice throughout the preparation of this thesis.

Next, I would also like to thank Jimma University, Institute of Health, Public Health Faculty, Department of Health Economics, Management and policy, Health Monitoring and Evaluation post Graduate unit for providing opportunity to prepare this thesis proposal.

I thank Konso Special Woreda health office and respective staffs of the Special Woreda in providing me data needed for the preparation of this thesis.

My special thanks also goes to supervisors, data collectors and caregivers of the Konso Special Woreda.

Lastly, but not least, I would like to thank my lovely wife, classmates and friends assisting me in one or the other way.

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Abbreviations and Acronyms

S.No	Abbreviations	List of each abbreviation and acronyms
1.	CI	Confidence Interval
2.	CMAM	Community Management of Acute Malnutrition
3.	CMR	Child Mortality Rate
4.	CTC	Community Therapeutic Care
5.	DHO	District Health Officer
6.	DHS	Demographic Health Survey
7.	ENN	Emergency Nutrition Network
8.	FANTA	Food and Nutrition Technical Assistance
9.	FMHACA	Food, Medicine, Healthcare and Control Authority.
10.	FMOH	Federal Ministry of Health
11.	GAM	Global Acute Malnutrition
12.	GoE	Government of Ethiopia
13.	HEWs	Health Extension Workers
14.	HFA	Height-For-Age
15.	HMIS	Health Management Information System
16.	iCCM	Integrated Community Case Management
17.	IDIs	In-depth Interviews
18.	IEC	Information, Education and Communication
19.	IMCI	Integrated Management of Childhood Illness
20.	IU	International Units
21.	IYCF	Infant and Young Child Feeding
22.	KAP	Knowledge, Attitude and Practice
23.	KCAL	Kilocalories
24.	KII	Key Informant Interviews
25.	KSW	Konso Special Woreda
26.	M&E	Monitoring and Evaluation
27.	MAM	Moderate Acute Malnutrition
28.	MUAC	Mid-Upper Arm Circumference
29.	NNP	National Nutrition Program
30.	NNS	National Nutrition Strategy
31.	NGO	Non-Governmental Organization

32.	NRU	Nutrition Rehabilitation Unit
33.	OPD	Outpatient Department
34.	OTP	Outpatient Therapeutic Program
35.	ORS	Oral Rehydration Salt
36.	PHCUs	Primary Health Care Units
37.	ReSoMal	Rehydration Solution for Malnutrition
38.	RHB	Regional Health Bureau
39.	RUTF	Ready-to-Use Therapeutic Food
40.	SAM	Severe Acute Malnutrition
41.	SC	Stabilization Center
42.	SD	Standard Deviation
43.	SNNPR	Southern Nations, Nationalities and People's Region
44.	SUN	Scaling Up Nutrition
45.	TFC /TFU	Therapeutic feeding center / Therapeutic Feeding Unit
46.	UN	United Nations
47.	UNICEF	United Nations Children's Fund
48.	UN/SCN	United Nations System Standing Committee on Nutrition
49.	USAID	United States Agency for International Development
50.	UNHCR	United Nations High Commissioner for Refugees
51.	WASH	Water, Sanitation, and Hygiene
52.	WHA	World Health Assembly
53.	WFH/WFL	Weight-For-Height / Weight-For-Length
54.	WFP	World Food Program
55.	WHO	World Health Organization

Definition of terms and operational definitions

1. **Availability** it refers to the presence and function of the service delivering infrastructures, services and human resources with their respective clients.
2. **Availability of RUTF**- The presence of at least 16 cartons of plumpy-Nut available in stock cards for the next 02 months from the first date of data collection period (3).
3. **Availability of essential routine medicines**: Essential drugs are those that satisfy the health care needs of the majority of the population; they should therefore be available at all times in adequate amounts and in the appropriate dosage forms(1). In this context, it was for availability of Amoxicillin tablets, Amoxicillin syrup (125mg/5ml), Vitamin“**A**” capsules, ORS, folic acid and Zinc sulphate) which should be available per 500 children per HP per month from date of data collection to the next two months in stock cards.
4. **Availability of reporting formats**: - it refers to availability of monthly reporting format from date of data collection to next two months.
5. **Correct classification**: All HEW classifications matched gold standard classifications.
6. **Adequacy of storage room**- a room with enough ventilation, dry and clean floor that have minimum of one month buffer stock at day of visit.
7. **Appropriateness**: refers to patient’s perspective of healthcare service provided including diagnosis, treatment, access to services and cost
8. **Correctly counselled**- at least HEWs greet and discuss key messages to caregivers
9. **Correctly managed for all main symptoms**- All HEW assess, classify, treat, refer and counsel caregivers matched gold standard algorithm for diarrhea,fever,pneumonia and malnutrition.
10. **Correct treatment**: All HEW treatments matched gold standard treatments.
11. **Compliance of provider**: in this case it refers to adherence to guideline during assessment, classification, treatment and referral of children at OTP and counselling the caregivers.
12. **Content Completeness**: is the presence of all recorded data on service registration books in the last two months from date of visit.
13. **Dissatisfied**: patient’s experience of the care is not up to their expectation
14. **Exit interview**: an interview conducted after client has visited the health care provider to check service satisfaction.
15. **General danger signs**: Not able to drink/breastfeed, vomits everything, had convulsions, and lethargy.

16. **General Service readiness** – General Service readiness refers to the capacity of the health facility to provide general health services(2,3).readiness is based on the presence of a core set of items present and functioning in the facility on the day of the assessment(4). In this context, it refers to availability of trained staff, essential drugs, therapeutic foods (RUTF) supply, basic amenities, basic equipment, Infection prevention and patient safety materials, job aids, HMIS recording and reporting tools required to provide treatment for children with SAM at OTP basis.
17. **Health Care Provider** - refers to the medical, nursing and allied health professionals, HEWs including community health workers (CHWs), who are currently working at HCs and HPs. But, in this study, it refers to HEWs actively working at the health posts.
18. **Implementation Status:-** The overall implementation status was calculated by taking the sum of availability ,compliance and acceptability dimensions scores and judged as follows ≥ 85 % excellent, 75-84.9 % Very good, 60-74.9 % good, 45-60% fair and < 45 % poor.
19. **Integrated community case management (iCCM);** refers to curative services for major childhood illnesses (diarrhea, malaria, pneumonia and acute malnutrition) provided by trained, but non-professional Community Health Workers(5).
20. **Mean Availability of tracer items** -The mean availability of each tracer item is equal to the total number of facilities that have the tracer item available (i.e. value=1), divided by the total number of facilities offering the service, multiplied by 100 to get a percentage value(6).It is the same to percentage availability of each tracer item in a domain.
21. **Outcome:** patient's or caregiver level of satisfaction.
22. **Outpatient Therapeutic Program (OTP):** It is a home based treatment and rehabilitation with a special formulated readily available therapeutic food(RUTF) provided on a weekly or bi- weekly basis, medical treatment using simplified medical protocols, and regular follow up for children with severely acutely malnourished without health complication(1–5).
23. **Percentage Availability (%) of all tracer items in a domain-**The percentage of health facilities that have all the tracer items for a service is equal the sum of facilities that have all the items (if all items, health facility score =1and =0 if otherwise) divided by the total number of facilities, and then multiplied by 100 to get percentage value(6).
24. **Process** – things done to and for the patient by HEWs in the course of treatment

25. **Satisfaction** – In the present study satisfaction may be understood as the client’s reaction to the service they received at the health post, relative to a conscious or subconscious standard that the patient had set during the encounter.
26. **Structure**-refers to the characteristics of the setting in which care takes place. constitute health posts physical environment, equipment and infrastructures
27. **Therapeutic Feeding program**; The term Therapeutic Feeding Program (TFP) is used in Ethiopia to describe the treatment of Severe Acute Malnutrition (SAM).
28. **Very satisfied**: patient’s experience of the care is above their expectation.
29. **Woreda** –is geographic classification of area within zone in Ethiopia, has the same meaning to district.

Chapter 1- Introduction

1.1. Background

Severe acute malnutrition(SAM)- is defined by “very low weight-for-height/length (Z- score below -3 standard deviation of the median World Health Organization child growth standards), or a mid-upper arm circumference < 115 mm, or by the presence of nutritional edema” (7).Moreover, in children aged 6–59 months, an arm circumference less than 110 mm is also indicative of severe acute malnutrition”(8).

Children with SAM are classified uncomplicated and complicated SAM according to the absence or presence of medical complications(9).Collins and Yates use this classification to differentiate between children who could be safely treated as outpatients and those who need more intensive inpatient care based on their clinical features and anthropometric measurements (10).

Uncomplicated SAM: children are those who are clinically well and alert, with a retained appetite and without signs of infection or other indication for hospital admission who need to be treated at outpatient basis using RUTF (10,11).However, Complicated SAM: children are those who have clinical features of infection, metabolic disturbance, severe oedema, hypothermia, vomiting, severe dehydration, severe anaemia or a lack of appetite, requiring inpatient treatment using F-75 and F-100 therapeutic diets. (10,11).

Despite the fact that child malnutrition arises from complex web of multidimensional and interrelated determinants(12–14) or caused by failure in many sector and complex interaction of economic, social, political, nutritional, and public health factors(15–17).But, a framework developed by United Nation Children’s Fund (UNICEF) recognizes three causes of malnutrition as immediate, basic and underlying causes of under-nutrition(18,19).

First, immediate causes of undernutrition may be insufficient dietary intake or the presence of disease which is a significant cause of ill health and poor development worldwide(20,21). Second, underlying causes of child undernutrition may be food insecurity within a household, inadequate care such as breast-feeding practices, unhealthy household environment, or a lack of health care services such as an absence of public health services(20,21).

Third, basic causes of child undernutrition may be a lack of available resources or poor utilization of resources due to various factors such as political, legal, or cultural factors(20,21). Poverty is generally acknowledged to be the major antecedent of malnutrition

and social protection and safety-net interventions are important to protect maternal and child nutrition (19,22,23).

There were 19 million children with severe acute malnutrition(SAM) who need treatment in the developing world including Ethiopia as of 2017 alone(24). Besides, global synthesis report by UNICEF indicates that the majority of SAM cases (18.5 million) resides in low and middle income countries including Ethiopia(25,26).Out of the 19 million children who need treatment, 14.25 million of cases were diagnosed as uncomplicated SAM which are ready for treatment at community based outpatient care(15,16,18,19,51).But, only 2.9 million (17%) children accessed treatment in 65 countries including Ethiopia in 2013 alone(15,16,18,19,51). Even though, there is an overwhelming evidence that nearly 50% of children under 5 years of age were dying of preventable diseases for which effective medicines existed(11,29).

In 2013, rates of incidence of stunting in Tigray was 51 per cent, Amhara 52per cent, SNNPR 44 per cent and Oromia 42 percent are higher than in urban settings(30).

In 2014, under nutrition was widespread in Ethiopia .Nationwide, 40% of children were stunted, 9% exhibit wasting, 25% were underweight and 27% of women of childbearing age were underweight and 17% of women and 44% of children were anemic(31).

In 2016, Ethiopian demographic health survey (EDHS) report revealed that 39 %, 10 % and 24% of under 5 years of age children in Ethiopia were stunted, wasted and underweight respectively(32). But, regions in Ethiopia, show large variations in Under-5 childhood mortality ranges from a low of 39 deaths per 1,000 live births in Addis Ababa to a high of 125 deaths per 1,000 live births in Afar region(32). In the Southern Nations, Nationalities and Peoples' Region, 39% of children were stunted which lies in the WHO, Cut-off values between 30-39% that indicates High prevalence cut-off values for public health significance (32,33).

The Food and Nutrition Situation survey of 2000 to 2004 in Konso Special Woreda revealed a prevalence of 20.2% global malnutrition (of which 1,2% severe) and deteriorating food security (34) and 3.6% Global Acute Malnutrition (GAM) and 0.3% SAM from 2003-2004 the Konso special woreda is still one of the hotspots of SAM in SNNPR(35,36). Similarly, Emergency Nutrition Response in Ethiopia as of 17 April 2017 by UNICEF report indicates that 192 out of 732 woredas targeted as hotspot in Ethiopia, Konso Special Woreda was one of the hotspot Priority woredas in the Southern Nations and Nationalities People Region(SNNPR)(37).

EDHS 2016, report indicates that Ethiopia made impressive achievements in scaling-up child health and nutrition interventions by decreasing the child mortality trends from 166 deaths per 1,000 live births in 2000 to 67 deaths per 1,000 live births in 2016, with 60 % decrease over the past sixteen years(32). Moreover , Stunting declined by 20% in Amhara region, 14% in Southern Nations and Nationalities People Regional sate (SNNPR), and 12% in Oromia region as of 2016 (38).Despite improvements in trends there are still some disturbing exceptions in many developing countries particularly in Ethiopia where., 39% of children under age 5 are stunted, 10% are wasted and 24% are underweight and 1% are overweight at nationwide (32,39,40).

The Outpatient Therapeutic Program (OTP) is treatment at home for children with severe acute malnutrition with appetite test and without medical complications(41). Nationwide, it is estimated that 80% of cases can be treated at home using ready to use therapeutic foods (RUTF) at health post level (8,42). RUTF is a pre-packaged energy and nutrient dense paste which is specifically designed for the rehabilitation of SAM(41).But, the Community based outpatient care coverage was estimated at 61% of 12,000 health posts in the country have outpatient services and there were still 458,000 and 303,000 children who require treatment for severe acute malnutrition as of 2016 and 2017 respectively(37,43,44). This implies that there are some children who are not accessible to OTP services at the OTP centers due its limited coverage and reducing malnutrition among children under the age of five remains a huge challenge in developing countries of the World such as Ethiopia.

To decrease and eventually eliminate acute malnutrition in under five children global strategies are in place from 2002-2030 to end all forms of malnutrition. To reduce child morbidity and mortality, community based outpatient therapeutic feeding program is an innovative approach to successfully treat malnourished children, is proven by WHO to manage SAM and MAM in children under-five at home and is currently implemented in more than 70 countries including Ethiopia(45). It is an appropriate model to address acute malnutrition, both in development and humanitarian contexts(46).This approach includes outpatient care for the management of children with SAM and no medical complications and inpatient cares for the management of children with SAM and medical complications(47).

Currently, in order to address all forms of undernutrition ,The Lancet Maternal and Nutrition Series (2008 to 2013) recommends the importance of adopting multi-sectoral approaches, combining nutrition-specific and nutrition-sensitive interventions across the life cycle to improve nutritional status of the population(48). Based on this recommendation ,Ethiopia

launches the second national nutrition program two (NNP-II) from 2016 to 2020, which addresses the multi-sectoral and multi-dimensional nature of nutrition ,and guides policies, strategies, programs and partnerships that deliver evidence-based, cost-effective nutrition interventions(40).

1.2. Statement of the problem

In order to reduce morbidity and mortality among children under age five years in Ethiopia, the national integrated community case management(iCCM) scale up implementation in Ethiopia aims to improve skills of providers by training, supportive supervision and improving health system, equipping facilities with supplies, equipment, drugs and access to health facilities near to the service users to improve quality of care (49).But, literatures in countries of Sub-Saharan Africa including Ethiopia indicates that infrastructure was so weak, low number of health care facilities, lack of human resources, an uneven distribution of health workers, high turnover of care providers, lack of qualified care providers and lack of medical equipment, lack of financial resources, medicines and low access to health care and poor supply chain management systems were the major constraints in delivery of cares(16,45,49–51). As a result, the quality of health services in rural areas is poor(16,45,49–51).

A study of health extension program in Ethiopia point out that, provision of equipment, drugs and supplies and supervision were the challenges in OTP implementation(52).But, it is recommended that Sufficient infrastructure to accommodate children and their caretakers and adequate provision of water taps, equipment, drugs and acceptable latrines improved quality of services(45).

In 2013,Evaluation of OTP in the five case study countries including Ethiopia by UNICEF indicates that most services had necessary equipment and tools (e.g. height boards, weight scales, MUAC tapes, registration forms, formats and national CMAM guidelines equipment for clinical examination of children, anthropometric tables) in good working conditions (45).

In 2014, a report on improving effectiveness of health extension program in Ethiopia, indicates that, Only 20% of the health posts are equipped with 80% of the minimum set of medical equipment while, one third (34%) of the health posts have 60% of the minimum set of medical equipment and fifty eight percent of health posts are equipped with 60% of the minimum set of medical equipment necessary for delivery and new born care services(53). Similarly, service availability and readiness assessment(SARA) of 2016 in Ethiopia, shows

that 52% of health posts have Child scale, 83% of health posts have thermometer, 4% of health posts had all items and 57% of health posts have mean availability of tracer items(3).

According to the Food, Medicine and health care and control authority of Ethiopia (FMHACA) health post requirements, health posts shall maintain four essential medicines such as Amoxicillin tabs, Amoxicillin syrup, and ORS and Zinc sulphate in their medication list in order to identify general service readiness(3).But, readiness assessment of the four essential medicines in Ethiopia as of 2016 shows that 60%,56%,39% and 30% of health posts had Amoxicillin tabs, Amoxicillin syrup ,ORS and Zinc sulphate respectively(3).However, The same report in SNNPR, also indicates that 56% of health posts had amoxicillin tablet , 44% of health posts had amoxicillin syrup , 38% of health posts had ORS and 6% of the health posts had Zinc sulphate(3). But, in 2013, nearly 90% of health posts had all the essential iCCM drugs and supplies during implementation strength and quality of care in Jimma zone (54).

In 2013, Global Synthesis Report by UNICEF on Evaluation of Community Management of Acute Malnutrition revealed that, there were constraints in logistics and supply such as (RUTF) and routine drugs in implementation of OTP(55,56).Similarly, a study conducted on challenges in implementing the Integrated Community-Based OTP in Rural Southern Ethiopia, shows that there were inadequate provision of RUTFs, lack of antibiotics and inappropriate exit from the program, where there were gaps and treatment errors in the services at health posts.(45,57,58).

It is recommended that each health post should have a way to safe final dispose waste and safety box to prevent infection prevention, an improved water source in their compound and acceptable latrine for clients. However, a study conducted by Kelemua G. and Gebeyaw T.(2014), indicates that four health facilities use well designed incinerator, eight health facilities use open pit and burning system (59) .The same report also indicates that, 64.4% of units in each health care facilities use safety box, 13.8% use of plastic pail without cover, 9.4% use plastic pail with cover and4.4% use non-standard, locally prepared sharp container(59)Moreover, only 17 percent health posts had an improved water source in their compound (45).

In 2013, Global Synthesis Report by UNICEF on Evaluation of Community Management of Acute Malnutrition revealed that, low adherence of HEWs to protocols, inconsistent record keeping, 27% of health posts were not equipped with necessary equipment supplies, supportive supervision and on-job capacity building activities was not adequate to health care

providers (55,56). Similarly, a study conducted on challenges in implementing the Integrated Community-Based OTP in Rural Southern Ethiopia, shows that there were inadequate provision of RUTFs, lack of antibiotics and inappropriate exit from the program, where there were gaps and treatment errors in the services at health posts.(45,57,58). Another study conducted by Yebyo. G et al. (2013) in Tigray, shows that partial administration of Routine medications and inappropriate management of children with medical complications by the health care providers were the major obstacles that makes the OTP program less effective (60). This implies that even children admitted to the program are not getting appropriate treatment due faulty case management providers that affect the quality of care and OTP coverage. But, it is recommended that health facilities providing OTP service are required to equipping health facilities with necessary logistics and supplies, establishment of guidelines, support and supervision for staff, training, and monitoring and adherence of health workers to SAM guideline for the effective implementation of the outpatient community based program(45).

It is believed that training of HEWs promotes quality of care during assessment, classification, treatment and counselling of caretakers with malnourished children(45), however, a pressing need has been identified for refresher training of health extension workers in order to strengthen their skills in adhering to protocols due to the fact that more than 56% of HEWs were not trained as of 2012 in Ethiopia (61). But, WHO recommends that at least 60 percent of providers need to be trained in case management to ensure a critical mass for proper management of sick children(3).

The national integrated community case management (iCCM) guideline states that health extension workers are responsible in the assessment, classification, treatment, referral and following up children with pneumonia, diarrhea and uncomplicated severe acute malnutrition in addition to counselling of their caregivers (62,63). But, in the study of iCCM strength and quality of care in Oromia region, only, 62%, 81% and 91% of children were correctly assessed for danger signs, main symptoms and malnutrition respectively. The same report also indicates that, 53%, 74% and 75% of children were correctly classified for malnutrition, pneumonia and diarrhea respectively. Moreover, 59% of children were correctly managed for malnutrition, 72% of children were correctly managed for pneumonia, and 79% of children were correctly managed for diarrhea in both west hararghe and Jimma zone (64).

In order to improve maternal and child health services at health post level the Ethiopian federal ministry of health (FMOH) recommends that at least one HEW should remain at the

health post level on daily basis from Monday to Friday with a time spent of at least 35 hours per week. But, according to an iCCM implementation strength and quality of care assessment in Oromia Region HEWs spend on average 20 hours per week at the health post (65,66). Moreover, a study conducted in Jimma zone on mother's experiences and satisfaction shows that 26.6 % of clients reported that HEWs are available regularly and 51.2% of clients reported that HEWs are available at the health post occasionally(67).

A study in Sidama district shows that, 60 %, 87%,80% and 59.9% of caregivers were satisfied with usage of basic equipment, politeness of health care providers, competence of providers and the cleanliness of the facility (68). Moreover, duration of consultation was not satisfactory for 26% , getting enough explanation was not satisfactory for 28% and 35% of caregivers were not satisfied with waiting time to get consultation(68). However, in a study conducted at different levels of health facilities in Bangladesh indicates that, Most respondents report that they were satisfied with the convenience of working hours and most Patients were unsatisfied with cleanliness of facility and privacy setting due to shortage of running water and sufficient space for privacy setting(69). Moreover, the majority of clients reported that they had lesser travel time of 15 minutes and waiting time less than 30 minutes before getting treatment(69). But, in a study of Client satisfaction and quality of health care in rural Bangladesh, a significant proportion of users (34.2%) were not satisfied with the length of time that the facilities were open to the public and about a third (28.2%) of all users were not satisfied with the time they waited to receive care(70).

A study conducted in Jimma zone indicates that, skills of HEWs and respect were determinant factors for their level of satisfaction. most clients reported that HEWs were less competent to provide a service and a unit increase in perceived respect score would increase the level of satisfaction by an average of 29% (67). But, Convenient of opening hours, cleanliness of facility and privacy setting were significantly associated with satisfaction. Besides, respectfulness and politeness of providers were the most important predictors for client satisfaction in a study of Client satisfaction in rural Bangladesh (70).

Even though, the Government of Ethiopia (GoE) is striving to reduce child morbidity and mortality by implementing the OTP at community level. The outpatient therapeutic program (OTP) of children with severe acute malnutrition (SAM) has been decentralized to health post level in Ethiopia since 2008-2009. Recently, adopted the '*seqota declaration*' that aims to eliminate all forms of malnutrition by 2030. The implementation process of OTP is facing gaps and challenges that hinders its sustainable developmental program goal and SAM is still

the major public health problem in Ethiopia and study area in particular, where there is no evidence about the implementation process in the study area.

Therefore, this evaluation determined the readiness of the facilities to provide SAM services, staff compliance to SAM guidelines in providing SAM service and patient satisfaction related factors that would affect implementation of the OTP program in Konso Special Woreda.

1.3. Significance of the evaluation

Evaluation is a crucial part of result based management(71) and provides clear and accurate information on results achieved by intervention. The principal purpose of this evaluation was, therefore, to help improve implementation status of program by providing valid and accurate information. The information is crucial;

- ❖ To implementers, support implementation with accurate and evidence based report about implementation status of program that requires change and create opportunity to show and reflect organizational good practice that increases staff motivation. Moreover, create opportunity of getting feedback from service users to accustom program design with their interest.
- ❖ To donors, it shows and help to fill the gap with in the program.
- ❖ To researchers, baseline data for further study.

Chapter 2- Description of the outpatient therapeutic program

Program description conveys the mission and objectives of the program being evaluated. Description should be sufficiently detailed to ensure understanding of program goals and strategies. The description should discuss the programs capacity to effect change, its stage of development, and how it fits in to the larger organization and community. Program description set the frame of reference for all subsequent decisions in the evaluation(72).

2.1.1. Out-patient Therapeutic program

Outpatient Therapeutic Program (OTP): It is a home based treatment and rehabilitation with a special formulated readily available therapeutic food(RUTF) provided on a weekly or bi-weekly basis, medical treatment using simplified medical protocols, and regular follow up for children with severely acutely malnourished without health complication(10,16).

The OTP offers services to severely malnourished children age 6–59 months and is run from health center or health post offering out-patient care to severely malnourished cases with good appetite and no complication. This group usually represents over 90% of all the cases(73).

Children with SAM of 6-59 months appear at an OTP site weekly or biweekly to receive RUTF, a course of oral broad-spectrum antibiotics, anti-helminthic treatment, folic acid, and, if appropriate, vitamin A, measles vaccination, and anti-malarial drugs(74).

2.1.2. Target population of OTP

- All children of 6-59 months of age with uncomplicated SAM in Konso Special Woreda, 2018.

2.2. Program stakeholders identification and engagement

Stakeholders are defined as “individuals, groups, or organizations that can affect or are affected” by an evaluation process or its findings(75).A strong results management process aims to engage stakeholders in thinking as openly and creatively as possible about what they want to achieve and encourage them to organize them to achieve what they have agreed on, including putting in place a process to monitor and evaluate progress and use the information to improve performances(76).Each stakeholder has their own role with respect to the operation of the program and use of finding they have contribution in the evaluation assessment and are likely to play unique roles during evaluation process.

The major stakeholders that were identified during evaluability assessment were, Jimma University, Segen Area Peoples Zone health department, Konso Special Woreda health

office, Karat town health post, Derayte health post health post,Dokatu health post,Fachuche health post,N/Segen health post, Busso health post, Dera health post ,Shakana health post,Kolalta health post, Etlie health post, Beayodie health post, Borkera health post, M/gezaba health post, Kurbo health post, Detata health post,Adieta health post, Shallo health post, Ashadie health post, Sulu health post, Berberssa health post, Sharanga health post,Hylota health post,Melga-dugaya health post, Garche health post, S/genet health post ,Sorobo health post,Gocha health post,Gamolie health post, Kebete health post, Gugnara health post,Chafaye health post ,Abaya health post, Gera health post, Mecheke health post ,Arfayde health post, Tishamale health post,Gelabo health post, Oshako health post , Lehayte health post ,Mechelo health post and respective active HEWs of the facilities.

The stakeholders provide us information on program performance, and they identified and prioritized the area of the program that is to be evaluated and Evaluation questions that the stakeholders need to be answered were agreed. Moreover, they were participated on indicator development and assigning value for each indicator and prepared cut-off point for level of program quality judgement.

2.2.1 Communication with stakeholders

Face to face communication was done with heads of woreda health office, health posts. Phone contact was done with Zonal health desk about the priority area that is to be evaluated, their contribution and how to utilize the results of the evaluation.

2.2.2. Stakeholder analysis matrix

Stakeholder analysis matrix was performed to know who are the key actors, their role in evaluation and program, interests and the level of importance on evaluation and program(77).In light of that, analysis was important to implementers to interact more effectively with stakeholder and enable evaluator before carrying out evaluation to detect and act prevent potential misunderstandings and or opposition to the implementation of evaluation.

The following table shows different stakeholders with their role in program and evaluation, perspective on evaluation, way of communication and level of importance described in *table-1*.below

Table 1. Stakeholder matrix analysis of OTP at health posts of KSW, 2018.

S.no	Stakeholders	Role in the program	Role in evaluation	Interest on evaluation	Level of importance	Means of communication
1	Segen Area Peoples Zonal Health Department (ZHD)	<ul style="list-style-type: none"> • Planning activities • Resource allocation • Supervise activities • implementation • Routine follow up & • Monitoring performance • Provide training 	<ul style="list-style-type: none"> • Set evaluation questions • Indicator development • Set judgement criteria 	<ul style="list-style-type: none"> • Use of findings for <ul style="list-style-type: none"> ○ Resource allocation ○ Supervise activities ○ implementation ○ Routine follow up & ○ Monitoring performance 	Medium	<ul style="list-style-type: none"> • Telephone • e-mail
2	Konso Special Woreda Administrative office	<ul style="list-style-type: none"> • Facilitate and create enabling environment • Resource allocation 	<ul style="list-style-type: none"> • Set evaluation questions • Indicator development • Set judgement criteria 	<ul style="list-style-type: none"> • To know equitability of access • Use of findings for program improvement 	medium	<ul style="list-style-type: none"> • telephone • e-mail
3	Konso Special Woreda health office	<ul style="list-style-type: none"> • Planning activities • Resource allocation • Supervise activities • implementation • Routine follow up & • Monitoring performance • Provide training 	<ul style="list-style-type: none"> • Set evaluation questions • Indicator development • Set judgement criteria • source of information • coordinate evaluation 	<ul style="list-style-type: none"> • Use of findings for <ul style="list-style-type: none"> ○ Resource allocation ○ Supervise activities ○ implementation ○ Routine follow up & ○ to know the gap 	High	Report Discussion & interview

4	Karat town Health Office	<ul style="list-style-type: none"> • Planning, • Resource allocation, • monitoring activities, • Evaluation performance of 	<ul style="list-style-type: none"> • Set evaluation questions • Indicator development • Set judgement criteria 	Use findings for <ul style="list-style-type: none"> • To identify gaps • Planning, • Resource allocation, • monitoring activities • Evaluation of performance 	medium	Formal letter telephone
5	head of HCs	<ul style="list-style-type: none"> • Planning activities • Resource allocation • Supervise activities • implementation • Routine follow up & • Monitoring performance 	<ul style="list-style-type: none"> • Set evaluation questions • Indicator development • Set judgement criteria • source of information • coordinate evaluation 	Use findings for <ul style="list-style-type: none"> • Planning activities • Resource allocation • Supervise activities • implementation • Routine follow up & • Monitoring performance 	High	Formal letter Interview Face to face
6	Health posts HEWs	<ul style="list-style-type: none"> • Planning activities • Service delivery <ul style="list-style-type: none"> ○ counseling ○ assessing, ○ classifying ○ treatment and referral of cases 	<ul style="list-style-type: none"> • Set evaluation questions • Indicator development • Set judgement criteria • source of information 	Use findings for <ul style="list-style-type: none"> • Planning activities • Service delivery 	High	interview face to face and telephone
7	Beneficiaries	<ul style="list-style-type: none"> • service utilization 	<ul style="list-style-type: none"> • Set evaluation questions • Indicator development • Set judgement criteria • source of information 	<ul style="list-style-type: none"> • Getting a quality service 	High	exit Interview
8	Donors (SAVE the children)	<ul style="list-style-type: none"> • Planning, • implementing, • mobilizing resource and • evaluating performance 	<ul style="list-style-type: none"> • Set evaluation questions • Indicator development • Set judgement criteria 	Use findings for <ul style="list-style-type: none"> • To identify gaps • Planning, • Resource allocation 	medium	Formal letter and e-mail, telephone

2.3. OTP program goal and objectives

2.3.1. Program goal

- To contribute for the reduction of child morbidity and mortality associated with severe acute malnutrition (SAM) in Konso Special Woreda,2018.

2.3.2. Program objectives.

- ❖ To increase the percentage of general service readiness score to more than 90 % by the end of 2018.
- ❖ To increase the proportion of children correctly managed for all main symptoms to > 91% by the end of 2018.
- ❖ To increase the percentage of registration book records completeness to > 90% by the end of 2018.
- ❖ To increase the percentage of supportive supervisions reports documented to > 90% by the end of 2018.
- ❖ To increase the overall patient satisfaction towards SAM service to > 75% by the end of 2018.

2.3.3. Major strategies

One of the OTP based strategy is utilization and involvement of health extension workers (HEWs), other community health agents and kebele /village level actors, in the planning and management of services which helps in decentralization of services to community and through use of Community-based mobilization, screening, follow-up, counseling, and education, allowing for earlier detection of malnutrition, continuous monitoring of care, and linkages with other services. Finally the community based OTP approach will increase coverage, access, and effectiveness of treatment for acute malnutrition(78).

Community mobilization enables cases of SAM to be caught before medical complications take hold but also provides mechanisms of referral for any complicated cases to inpatient care and Patients in the OTP receive routine medicines for severe malnutrition (oral antibiotics, folic acid, anti-helminth drugs and if appropriate anti-malarial and 200Kcal/kg/day of RUTF to eat at home. They attend the OTP every week or fortnightly to have a medical checkup, receive additional medical treatments if required, and to be given a supply of RUTF sufficient until their next appointment(26).

2.4.1. OTP Program inputs

1. Human resources for training and implementation
2. Financial resources
3. service delivery (OTP services)
4. Infrastructure (Basic amenities, Infection Prevention and patient safety materials, Medical equipment, routine essential drugs and other material supplies)

3.1. Medical equipment for OTP

- ❖ Thermometer
- ❖ weight scale
- ❖ Height board
- ❖ MUAC tape
- ❖ stadio-meter

3.2. OTP Supplies and drugs

- ❖ RUTF
- ❖ Oral Rehydration Salt (ORS)
- ❖ Vitamin A capsule
- ❖ Amoxicillin tablets
- ❖ Amoxicillin syrup (125 mg/5 ml)
- ❖ Folic Acid tablets

3.3. Material cards/job Aids for OTP

- ❖ OTP client cards
- ❖ Reporting formats
- ❖ guidelines
- ❖ OTP registration books
- ❖ referral forms
- ❖ iCCM classification Algorithm wall chart
- ❖ MUAC classification table
- ❖ Target weight chart

3.4. Basic amenities, store room and IP

- ❖ OTP units
- ❖ Electricity
- ❖ Telephone line
- ❖ Tap water
- ❖ Vehicle/ ambulance
- ❖ drug store room
- ❖ Sanitation facilities
- ❖ Infection prevention and patient safety materials.

2.4.2. OTP Program activities

- ❖ counselling caregivers about malnutrition
- ❖ Training of health extension workers in OTP

- ❖ Monitoring and supervision
- ❖ equipping HPs with Basic amenities
- ❖ equipping HPs with basic medical equipment
- ❖ supply of routine drugs and RUTF
- ❖ supply of job aids/material cards to HPs
- ❖ Equipping HPs with IP and patient safety materials.
- ❖ assessing children with SAM
- ❖ classifying children with SAM
- ❖ treating children with SAM
- ❖ referring children with SAM
- ❖ recording and reporting

2.4.3. OTP Program outputs

- ❖ Number of caregivers counselled about malnutrition.
- ❖ Number of trained health extension workers
- ❖ Number of Supportive supervisions conducted
- ❖ Number of HPs equipped with Basic amenities
- ❖ Number of HPs with availability of routine drugs and RUTF
- ❖ Number of HPs with availability of basic medical equipment
- ❖ Number of HPs with availability of job aids/material cards
- ❖ Number of HPs with availability of infection prevention and patient safety materials.
- ❖ Number of HEWs adhered to OTP treatment protocol
- ❖ Number of SAM children assessed
- ❖ Number of SAM children classified
- ❖ Number of SAM children treated
- ❖ Number of SAM children referred
- ❖ Number of HPs with consistent OTP registration book recording

2.4.4. Expected OTP Program outcomes

- ❖ Patient satisfaction
- ❖ Improved compliance to guideline
- ❖ Increased utilization of services
- ❖ Increased community awareness
- ❖ improved nutritional status

2.4.5. Expected OTP Program impact

- ❖ Reduced child Morbidity

❖ Reduced child Mortality

2.5. Program logic model of Process Evaluation of Outpatient Therapeutic Program at Konso Special Woreda, 2018.

- ❖ **Statement of problem:** In Ethiopia, 1 in 15 children dies before reaching age five & the under-five mortality rate is 67 deaths per 1,000 live births as indicated by EDHS 2016 report (32). In the Southern Nations, Nationalities and Peoples' Region (SNNPR), 39% of children were stunted (32) which lies in the WHO, Cut-off values between 30-39% that indicates high prevalence cut-off values for public health significance (128-130).
- ❖ **Goal:** To contribute for the reduction of child morbidity and mortality associated with severe acute malnutrition (SAM) in Konso special woreda, 2018.

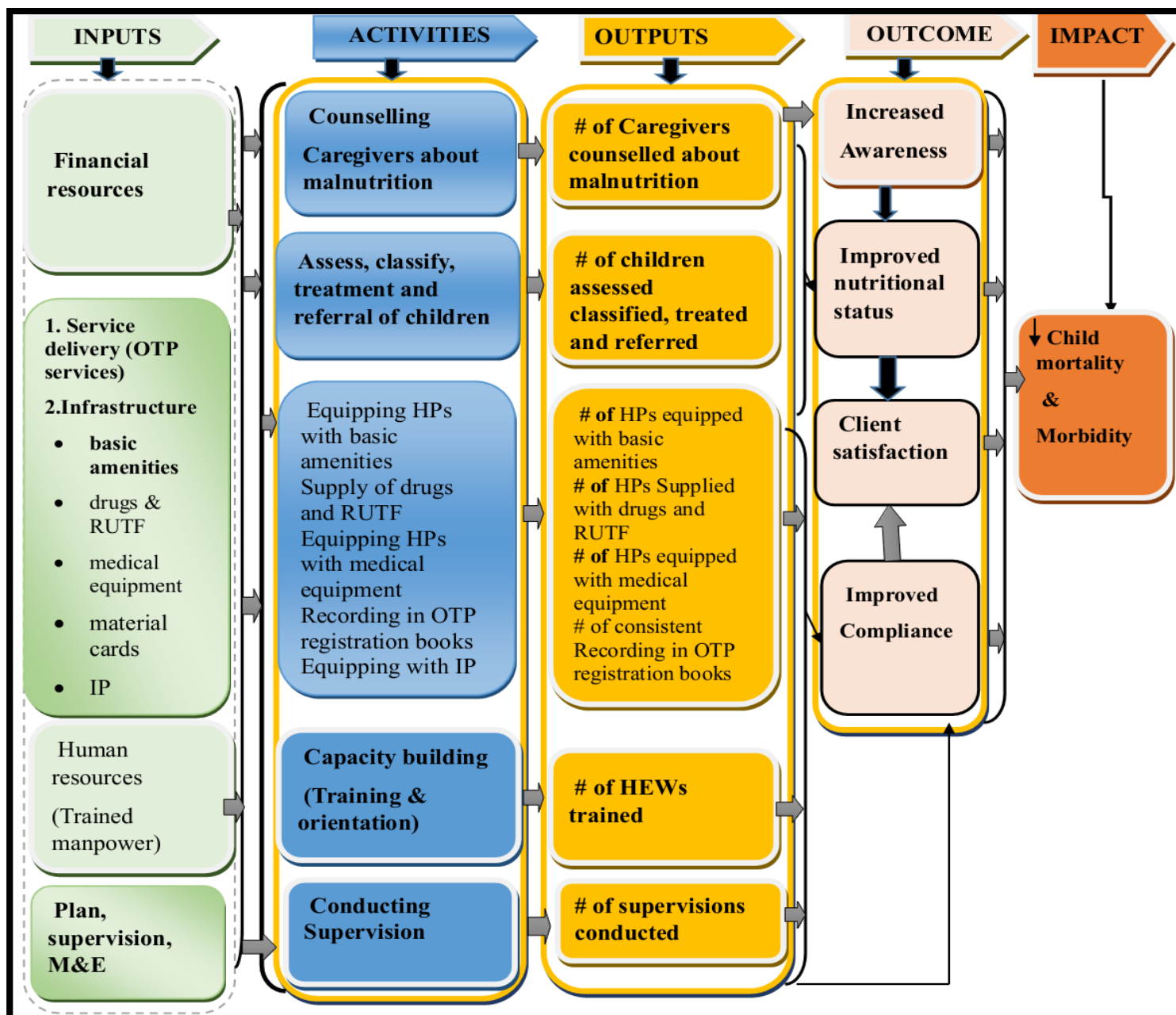


Figure 1. program logic model of OTP evaluation at KSW, 2018.

2.6. OTP Stage of program development

2.6.1. OTP stage of program development at global level

The community management of acute malnutrition (CMAM) is a program that involves three treatment modalities, namely: inpatients management at the stabilization center established near the target communities for children with medical complications, outpatient management(OTP) for children without medical complications, community mobilization and supplementary feeding for children with moderate acute malnutrition(46,74).

The Community based outpatient Therapeutic Care was piloted in 2000 as part of a research program in Malawi, Ethiopia and South Sudan by Steve Collins (79). In 2002, it was implemented by Valid International and Concern Worldwide, to test the efficacy and safety of the CMAM/OTP approach in southern Ethiopia in particular(16,80,81).

The approach, regardless of some limitation and drawbacks; get recognition from the national government and now is adopted all over the country as the best nutrition approach(16).

2.6.2. OTP stage of program development at Ethiopia level

During the 2003 to 2004 period of food security crisis due to drought developed across many areas of the country in Ethiopia. This crisis was the catalyst for many international Non-governmental Organizations to adopt the Community based outpatient Therapeutic Care approach of treating the majority of cases as outpatients, through establishing the Therapeutic Feeding Centers(80).

From 2004 to 2005, FMoH Ethiopia alongside with UNICEF and other partners commenced scale-up of SAM treatment services by developing guidelines and establishing more inpatient and outpatient services across the country and finally endorsed internationally by United Nations (U.N.) agencies in 2007 during humanitarian emergencies(57) and it was found to be so effective that it achieved nutritional recovery rates of almost 80 percent, with low case fatality rates of <5 percent(26).

In 2008, the World Health Organization (WHO) formally endorsed the community management of acute malnutrition protocol as the preferred method of treatment for the approximately 13 million acutely malnourished children in the world(82).this protocol reflected a change in treatment strategies from the hospital to the community. In an effort to decrease the prevalence and incidence of SAM, The Government of Ethiopia plans to halt under-five children malnutrition by 50%. This plan has been evident in the Growth and Transformation Plan, HSTP and the National Nutrition Strategy(83).

National Nutrition Strategy of Ethiopia was released since 2008 to address malnutrition and ensure sustainable human economic development(84) .

The National Nutrition Strategy has a goal to make all Ethiopians especially, high risk groups such as, children, pregnant/lactating women, individuals with HIV and households affected by food insecurity are capable of gaining adequate nutritional status sustained forever(85). The national iCCM program was officially launched on 23 February 2010 with 30,000 trained HEWs and supported to provide iCCM services in over 14,000 health posts(62). Followed in 2011 by gradual expansion to the four developing regions of Benishangul, Gambella, Afar, and Somali regions.

To guide the implementation of NNS, the National Nutrition Programs (NNP) was developed since 2013 and ended since 2015, with the aim of reducing the magnitude of stunting prevalence from 44% to 30% coordination, harmonization and scaling up current nutrition interventions with a greater focus on community based and high impact interventions and harmonizing government strategies various donor programs(85–87). But, some challenges remain after implementation. These were, problems of implementation dissemination of NNS and NNP at zones and woreda level, the HEWs were not trained properly to manage SAM case at health posts, delays between referral and getting services at the health centers, under staffed human, financial and material resources were in place for the implementation of the nutrition program and the coordination mechanisms are not fully operational as envisioned by NNS(85).

The second phase of NNP (NNP-II), which covers the period from 2016 to 2020, addresses the multi-sectoral and multi-dimensional nature of nutrition, and guides policies, strategies, programs and partnerships that deliver evidence-based, cost-effective nutrition interventions(83). Ethiopia recently launched the revised version the National Nutrition Program (NNP), which considers CMAM an integral aspect, not only of emergency response, but of the overall resilience strategy of the Ministry of Health(88). Since 2015, the GoE launched the “*Seqota*” Declaration (2015-2030) aims to eliminate all forms of undernutrition by 2030 Nutrition is fully integrated in the Health Sector Transformation Plan (HSTP) and is in line with, Sustainable Development Program(89). In a broader context, in 2016, nutrition indicators are included in the Growth and Transformation Plan (GTP), an economic development plan of the Government of Ethiopia (90).

2.6.3. OTP stage of program development at SNNPR

In 2008, a dramatic and rapid increase of SAM cases was seen across Oromia and Southern Nations, Nationalities and People's (SNNPR) regions as food security deteriorated due to drought. Responding to this emergency by maximizing access and coverage of these life-saving services, the FMOH reviewed the evidence of CMAM effectiveness when implemented at health center level and made the decision to decentralize CMAM services to primary health care (health post) level; OTP managed by the HEWs(73).

2.6.4. OTP stage of program development at Konso Special Woreda

From 2008 to the present. Importantly during this phase, the FMOH established itself as the leader and owner of the Outpatient therapeutic program. In 2008, drought and high food prices again caused dramatic increases of SAM cases. The FMOH decided to rapidly scale up CMAM by decentralizing OTP to HPs and made concerted efforts to integrate the TFP into the health system. This was facilitated by the changing mindset of the IPs and their willingness to provide technical assistance within the FMOH health system rather than establish their own TFUs (91). During this phase, stakeholders agreed that the CMAM approach needed to be developed within the health service delivery system and to function on a permanent basis. The children with SAM could then be treated quickly close to the community, which would take some pressure off of the overloaded HCs.

The FMOH requested funding and technical support from UNICEF and partners to scale up OTPs to 100 districts and 1,239 HPs and build the capacity of 2,478 health extension workers including Konso Special Woreda. As of May 2011, CMAM services were extended to 622 woredas; there are 8100 health facilities (HPs and HCs) providing OTP services and 473 HCs and hospitals providing in-patient care in TFUs(91).

Table 2-summary of the initiation and progress of CMAM implementation in Ethiopia

Ethiopia	Initial phase 2002	Intermediate phase 2004 – 2008	National ownership Phase From 2008-present	Implementation modality
8100 outpatient treatment services and 473 inpatient treatment services	Initiated in response to an emergency (during a period of drought and food shortage); establishment of structures for SAM treatment in the health centres and hospitals	- Introduction of the approach to SAM treatment using community-based system; treatment managed through outpatient treatment centres established within the national health centres	-Inclusion of CMAM in the HSDP IV and NNP/NNS -Scaling-up in the country	-Through local and International NGOs with UNICEF support and other partners -Direct support of District health facilities by UNICEF and other partners

(SOURCE- Global CMAM Synthesis Survey, UNICEF (2012))

Chapter 3- Literature Review

Malnutrition is major contributing factor for U-5 mortality and access to high impact interventions and the appropriate delivery of interventions to target groups is essential for reducing deaths related to malnutrition. Thus, in this section the factors affecting implementation of OTP services such as availability, compliance and acceptability dimensions will be presented. Moreover, conceptual framework for the evaluation is also be presented.

3.1. Factors affecting implementation of OTP interventions

Implementation of nutrition programs depends on availability of a working health system in order to achieve the desired program outcomes. Some of the factors that affect the implementation of nutrition programs are described below.

3.1.1. Availability dimension

In order to reduce morbidity and mortality among children under age five years in Ethiopia, the integrated management of child hood illnesses strategy aims to improve skills of providers by training, supportive supervision and improving health system, equipping facilities with supplies, equipment, drugs and access to health facilities near to the service users to improve quality of care (49).But, studies on countries of Sub-Saharan Africa including Ethiopia indicates that infrastructure development was so weak, limited number of health care facilities, lack of human resources, an uneven distribution of health workers, high turnover of care providers, lack of qualified care providers and lack of medical equipment and medicine and low access to health care and poor supply chain management systems were the major constraints in delivery of cares(49–51).

Even though the health extension program implementation guidelines recommends placement of two health extension workers per HP. But, the actual staffing pattern of HEWs varies in Ethiopia from region to region with the exception of Amhara region which closely adheres to the guideline. most other regions including SNNPR, they placed one HEW per HP until the full complement of HEW is available(92).

Proportion of health facilities with availability of vehicle for emergency transport was one of the availability indicators. But, in a study of SARA in Ethiopia as of 2016, 84% of the facilities have access to an ambulance or other vehicle for emergency transport for clients that is stationed at another facility or that operates from another facility in near proximity(3).

According to the Ethiopian FMHACA health post requirements, health posts shall maintain four essential medicines such as Amoxicillin tabs, Amoxicillin syrup, and ORS and Zinc sulphate in their medication list in order to identify general service readiness(3). Moreover, readiness assessment of the four essential medicines in Ethiopia as of 2016 shows that 60%,56%,39% and 30% of health posts had Amoxicillin tabs, Amoxicillin syrup ,ORS and Zinc sulphate respectively(3).

Amoxicillin tabs and Amoxicillin syrup were the most frequently available essential drugs in health posts surveyed. However, The same report in SNNPR, also indicates that 56% of health posts had amoxicillin tablet , 44% of health posts had amoxicillin syrup ,38% of health posts had ORS and 6% of the health posts had Zinc sulphate(3). According to the national iCCM database report of 2013, (90%) of health facilities had ORS, only three quarters (75%) of health facilities had RUTF and only about half (54%) of health facilities had zinc on the day of visit (63,93).

In 2014, a report on improving effectiveness of health extension program in Ethiopia, indicates that there was shortage of drugs in the health posts(53). however, another study in Oromia as 2013 indicates that nearly 90% of health posts had all the essential iCCM drugs and supplies during implementation strength and quality of care in Jimma zone (54).

Service Availability and Readiness Assessment Summary report of 2016 in Ethiopia shows that 52% of health posts have Child scale, 83% of health posts have thermometer, 4% of health posts had all items and 57% of health posts have mean availability of tracer items(3).The same report also indicates that, thermometer was the least available medical equipment which available in 14(70%) health posts. But, in 2013,Evaluation of CMAM in the five case study countries including Ethiopia by UNICEF indicates that most services had necessary equipment and tools (e.g. height boards, weight scales, MUAC tapes, equipment for clinical examination of children, anthropometric tables) in good working conditions (45).

In 2014, a report on improving effectiveness of health extension program in Ethiopia, indicates that there was shortage of medical equipment supply. Thus, Only 20% of the health posts are equipped with 80% of the minimum set of medical equipment while one third (34%) of the health posts have 60% and fifty eight percent of health posts are equipped with 60% of the minimum set of medical equipment necessary for delivery and new born care services(53).

Adherence to guidelines is facilitated by the evidence-based ICCM chart booklet, by the registers that match the steps in the booklet, and by the many hand-made flipchart sheets taped to the HP walls that specify respiratory rate cut-offs, steps of case management, general danger signs, and more(63).But, a study on integrated community case management in Beneshangul-gumuz region shows that all of the HPs had chart booklets and registration books (94).But, in the study of assessment of ICCM implementation strength and quality of care in Oromia region, Health posts in west Hararghe had no all essential supplies and job aids. However, only 15% had a patient register and none had a chart booklet in Jimma zone (64). But, in 2013,Evaluation of CMAM in the five case study countries including Ethiopia by UNICEF indicates that most services had necessary equipment and tools such as registration books, formats and national ICCM guidelines in good working conditions (45).

It is recommended that each health post should have a way to dispose waste such as incinerator or open burning in a protected area in order to prevent infection prevention. However, a study conducted by Kelemua G. and Gebeyaw T. in 2014 indicates that four health facilities use well designed incinerator, eight health facilities use open pit and burning system (59) .The same report also indicates that, the availability of in site collection materials for wastes ,64.4% of units in each health care facilities use safety box, 13.8% use of plastic pail without cover, 9.4% use plastic pail with cover and 4.4% use non-standard, locally prepared sharp container(59).

It is recommended that Sufficient infrastructure to accommodate children and their caretakers and adequate provision of water taps and acceptable latrines improved quality of services(45).But, a study of health extension program in Ethiopian point out that, provision of supplies were one of the challenges in implementation(52). The same report also indicates that ,25 percent of health posts had no protected water,16 percent had no toilet, many of the health posts did not have basic infrastructure such as ,electricity , water supply and a fixed telephone were available in 8 percent, 5 percent and 21 percent of the health posts respectively(52,95).

3.1.2. Compliance dimension

The national ICCM guideline sates that health extension workers are responsible in the assessment, classification, treatment, referral and following up children with pneumonia, diarrhea and uncomplicated severe acute malnutrition in addition to counselling of their caregivers (62,63),But, in the study of assessment of ICCM strength and quality of care in Oromia region,62% and 93% of children were assessed for all main symptoms in west

Hararghe and Jimma zone respectively(64).Moreover, Only 45% of children were assessed for general danger signs in West Hararghe than 74% the proportion Jimma zone. Of the sample of children with pneumonia and diarrhea 74% and 75% of children were correctly classified for pneumonia and diarrhea respectively by the HEWs in both Jimma zone and west Hararghe. The same report also shows that, 24% and 53% of children with malnutrition were correctly classified for malnutrition in West Hararghe and Jimma zone respectively(64).Moreover, out of a sample of children 64% of them were correctly managed for all ICCM illnesses with 68% in Jimma and 59 % in west Hararghe. out of sample of children,59% of children with malnutrition,72% of children with pneumonia and 79% of children with diarrhea received correct treatment in both west Hararghe and Jimma zone (64).

To improve quality of case management in children with SAM, frequent supervision, adherence to guidelines, continuous training, the availability of quick reference, equipment, drugs, job aids and standard operating procedures are the contributing factors for success of OTP services. This was supported by an Evaluation of Community Management of Acute Malnutrition in five case study countries of Chad, Ethiopia, Kenya, Nepal and Pakistan in 2013, that Outpatient treatment services in treating SAM without complications were effective(45).

In Ethiopia the regular schedule of integrated supportive supervision to health posts is conducted annually, biannually, quarterly, monthly and weekly by the FMOH, RHB, ZHD, DHO and health centers respectively(52,63).But, in 2014,a study of effectiveness of supportive supervision in Ethiopia revealed that all health posts received at least one supportive supervision visit, 41% received two, and 15% received more than two over two and half years period(66). In 2013, A study of assessment of ICCM strength and quality of care in Oromia region indicates that 82% and 91% of health extension workers receive supportive supervision in the previous three months in Jimma and west Hararghe respectively(64).

3.1.3. Acceptability dimension (client satisfaction)

“The complex nature of patient satisfaction’s concept implies that dimensions to be investigated are well identified considering the patient perspective”(96,97). “Monitoring and evaluating consumer satisfaction with health care is a crucial input to improving the quality of health system and changes in the system as well as providing feedback for health care professionals and policy makers”(98,99). Measures of consumer satisfaction with health care can provide important assessment of quality of health care not adequately captured by other

health service statistics such as patient through, waiting times, consultation times and proximity”(99,100).

In order to improve maternal and child health services at health post level the Ethiopian federal ministry of health (FMOH) recommends that at least one HEW should remain at the health post level on daily basis from Monday to Friday with a time spent of at least 35 hours per week. But, according to an iCCM implementation strength and quality of care assessment in Oromia Region HEWs spend on average 20 hours per week at the health post (65,66).moreover, a study conducted in Jimma zone on mother’s experiences and satisfaction shows that 26.6 % of clients reported that HEWs are available regularly and 51.2% of clients reported that HEWs are available at the health post occasionally(67).

In a study of client satisfaction for health service provision in West Amhara region of Ethiopia reported that 39.3% of clients were satisfied with the overall health care service received(101),58 % of caregivers were satisfied with the overall quality of care in Sidama district(68) and 52% of clients were satisfied with the overall health care service they received in Bangladesh (69).

In the study of Client Satisfaction, Primary Health Care & Utilization of services in Sidama district 60 % of caregivers were satisfied with usage of basic equipment, 87% satisfied with the humanness of health care providers, 80% of caregivers satisfied with the competence of providers and 59.9% of caregivers satisfied with the cleanliness of the facility (68).Moreover, duration of consultation was satisfactory for 74% of caregivers ,72% of caregivers were satisfied with getting enough explanation about treatment and 65% of caregivers were satisfied with waiting time to get consultation(68). In a study of client satisfaction for health service provision in West Amhara region of Ethiopia, Poor cleanliness of the facility, fewer service access provision, lack of prescribed drugs within the facility and longer waiting time to get the healthcare service was reported by 73.2% ,67.8%, 65.6% and 59.2% of the clients respectively(101). However, in a study of Factors influencing patient’s satisfaction at different levels of health facilities in Bangladesh, Most respondents report that they were satisfied with the convenience of working hours and most Patients were unsatisfied with cleanliness of facility and privacy setting due to shortage of running water and sufficient space for privacy setting(69).moreover, the majority of clients reported that they had lesser travel time of 15 minutes and waiting less than 30 minutes before getting treatment(69).But, in a study of Client satisfaction and quality of health care in rural Bangladesh, A significant proportion of users (34.2%) were not satisfied with the length of time that the facilities were

open to the public and about a third (28.2%) of all users were not satisfied with the time they waited to receive care(70).

A study conducted in Jimma zone on mother's experiences and satisfaction indicates that, skills of HEWs and respect were determinant factors for their level of satisfaction. most clients reported that HEWs were less competent to provide a service and a unit increase in perceived respect score would increase the level of satisfaction by an average of 29% (95% CI: 14%–45%, $p = 0.001$) (67).But, Convenient of opening hours, cleanliness of facility (AOR, 4.3, 95% CI: 3.29-5.6) and privacy setting (AOR, 1.68, 95% CI: 1.28-2.21) were significantly associated with satisfaction. in a study of Factors influencing patient's satisfaction at different levels of health facilities in Bangladesh (69). But, respectfulness and politeness of providers were the most important predictors for client satisfaction in a study of Client satisfaction and quality of health care in rural Bangladesh (70).

3.2. Theoretical framework of the evaluation

“Without guidance from a conceptual framework, it is difficult for an evaluator to know about the external environment appropriate for investigation”(102). In this evaluation, Denabedian model were applied. According to denabedian, there are three areas of measuring of program, these are S-P-O (Structure-process-outcome). Moreover, Lindelow M and Wagstaff A, (2001), recommends that to measure implementation of care data should be collected on structural dimension such as the availability and quantity of inputs considered, the process of delivery such as client-provider interaction observation and caregivers perceptions or satisfaction on the service provided(103). According to Donabedian client satisfaction is the degree to which patient's expectations are fulfilled and one of the outcomes in the three dimensions of the model. Hence, this model is used to fit the process evaluation of OTP at health posts of Konso Special Woreda as follows.

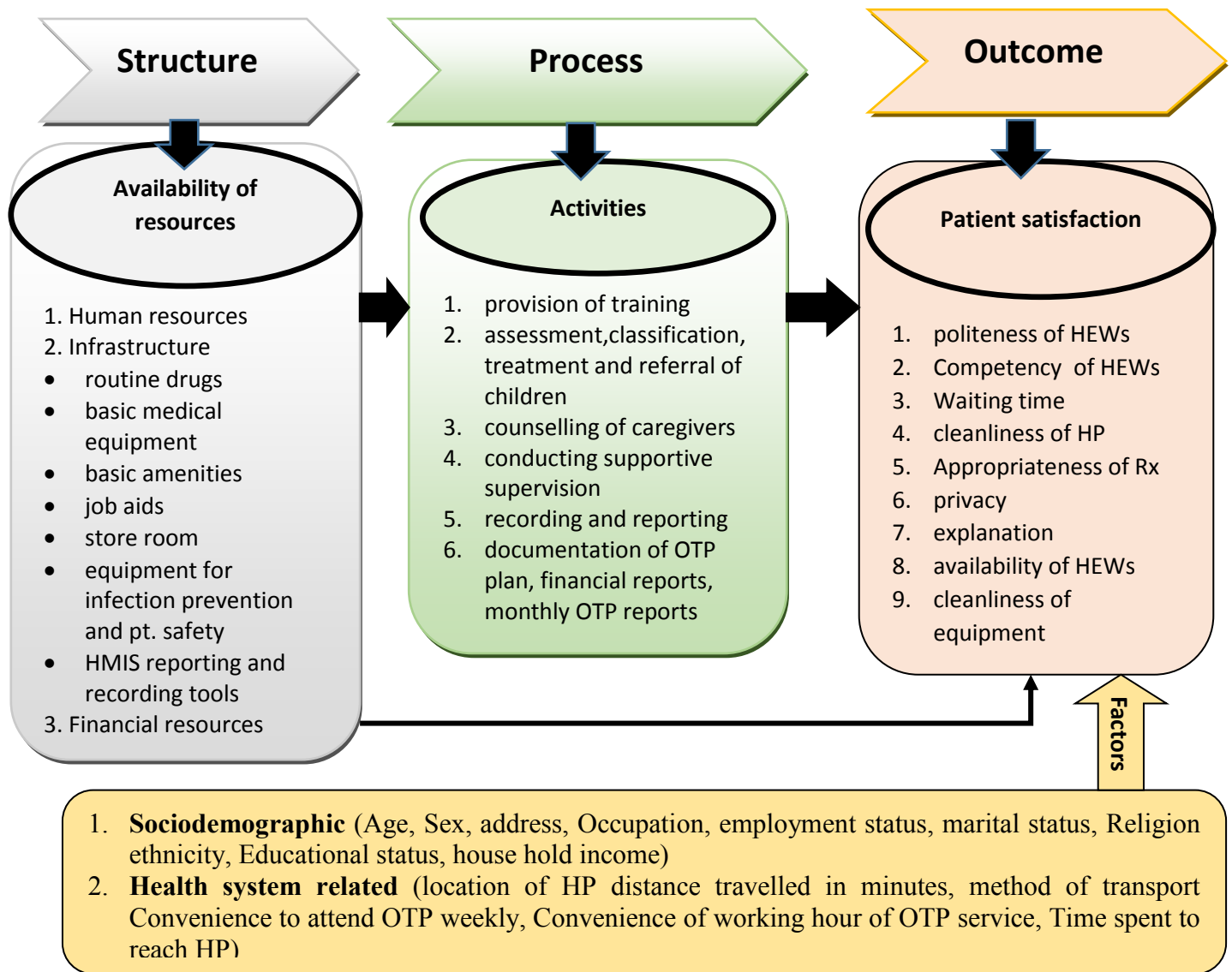


Figure 2-Conceptual framework of the OTP an evaluation at Konso Special Woreda, 2018

(Adapted from Donabedian (2003)(104).

Chapter 4: Evaluation Questions and Objectives

4.1. Evaluation questions

4.1.1. General evaluation question

- What is the overall implementation status of the outpatient therapeutic program in health posts of Konso Special Woreda, SNNPR, 2018?

4.1.2. Specific evaluation questions

Evaluation questions that are agreed upon with stakeholders to be answered by this evaluation are:

1. Are the resources available for the implementation of the program? If not, why?. If yes, how?
2. Is the Outpatient therapeutic program implementation in compliance with the national ICCM guideline standards? If not, why?, if yes, how?
3. What is the level of client satisfaction with OTP service?
4. What are the caregivers and health system related factors that have contribution to caregiver's satisfaction in OTP service provided?

4.2. Objectives

4.2.1. General objective

- To assess the implementation status of outpatient therapeutic program at health posts of Konso Special Woreda, SNNPR, 2018.

4.2.2. Specific objectives

- 1) To assess whether the intended program resources are secured for the implementation of the outpatient therapeutic program, 2018.
- 2) To describe/evaluate the HEWs compliance to national ICCM guideline, 2018.
- 3) To determine level of client satisfaction with OTP service, 2018.
- 4) To identify caregivers and health system related factors that have contribution to caregiver's satisfaction in OTP service provided,2018

Chapter 5- Evaluation Methods and materials

5.1. Evaluation area

Konso special Woreda is one of the five Woreda's of Segen Area Peoples Zone (SAPZ) in Southern Nation and Nationalities Peoples Region (SNNPR). It is located at 640 Kms south west of Addis Ababa and 365 Kms away from capital city of SNNPR, Hawassa and 90 kms away from Arba Minch. The Woreda comprises two urban Keble's and 41 rural kebele or peasant associations. The total population of the woreda is 258,832 of whom more than 124,693 are males and 134,057 are females. The woreda settlement pattern shows that 239,422 people live in rural areas while 11,328 people live in urban areas. The capital of Konso Special Woreda is Karat Town. The lively hood of the Konso community is mixed farming; crop cultivation complimented by small live stock holdings(105,106).

There are 59 primary health care facilities (HFs) in Konso special woreda where there is one district hospital, [eleven health centers (HCs) and 47 health posts (HPs)] are providing health

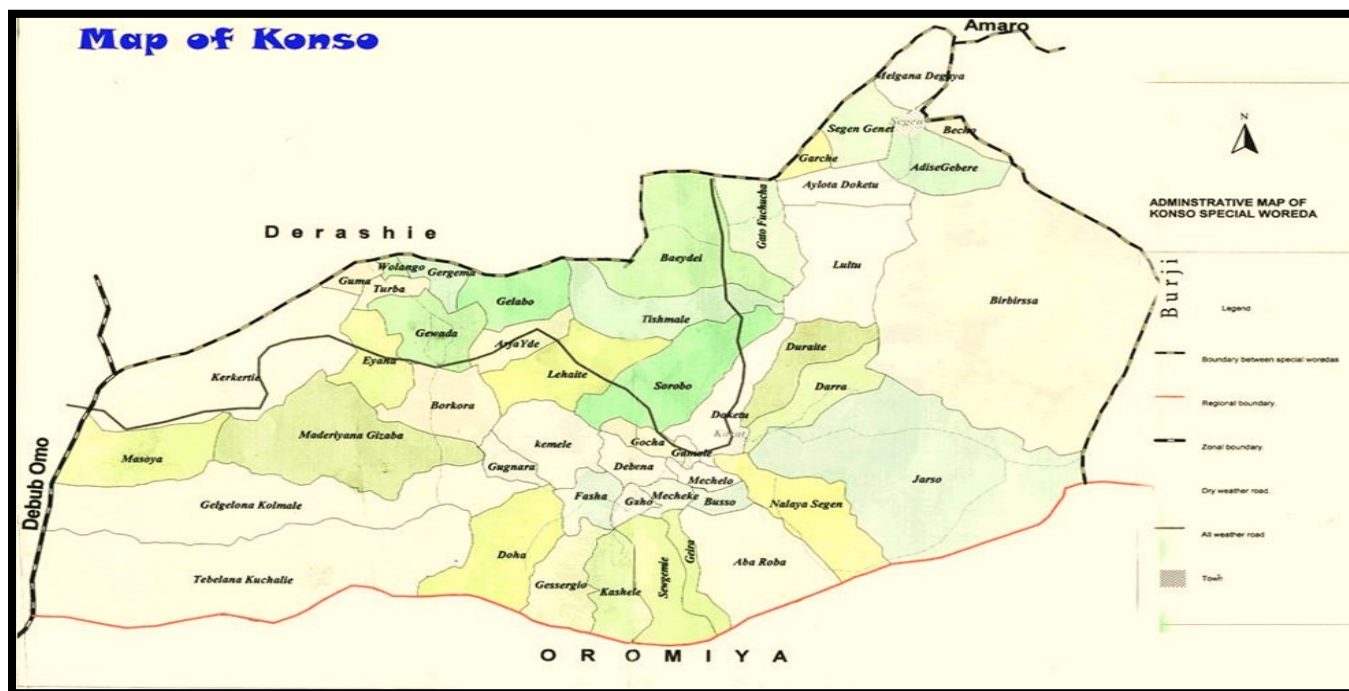


Figure 3- administrative map of Konso Special Woreda, 2018

service for the community .Out of the 59 primary health care facilities there are 52 health facilities providing acute malnutrition service to the community of which 40 are functional health posts which provides OTP services ,7 HPs are not still functional, and 11 are HCs which provides SC services and there is one district hospital which provides SC services (105).

5.2. Evaluation period

The Evaluability assessment was conducted from November 13-17/2017 and the Evaluation were conducted from March 19- April 20/ 2018.

5.3. Evaluation approach

Formative evaluation were used because it primarily provides information for the program implementation status and the process of OTP service. In such a way that, OTP is an ongoing process as health facilities, patients and service providers are there in place and the program is in its implementation stage in case of this study. This process evaluation answers questions like compliance to ICCM guidelines, readiness of facility to provide OTP services, acceptability and patient satisfaction associated factors of implementation process of OTP.

Besides, this evaluation also seeks to strengthen the OTP program by examining the delivery of the services, the process of its implementation and the organizational context, personnel, structures and procedures. As a Formative evaluation is a change oriented evaluation approach, it is especially attuned to assessing in an ongoing way, any discrepancies between the expected direction and outputs of the program and what is happening in reality, to analyzing strengths and weaknesses of implementation of OTP services, to identify obstacles, barriers or unexpected opportunities, and to generating understandings about how the program could be implemented better in the future and this is also the main purpose of this evaluation(107).

5.4. Evaluation design

Considering the limited time and resource available for this evaluation and to match the design with the focus of the evaluation which is process, the appropriate design was facility based case study design with both quantitative and qualitative methods were conducted from March 19- April 20/ 2018. This evaluation includes 20 health posts which provides OTP service in Konso Special Woreda.

The unit of analysis for this case were caregivers, heads of HCs and head of woreda health office and health extension workers as primary unit of analysis. All government health posts of Konso Special Woreda was secondary units of analysis and OTP program of Konso Special Woreda was the final units of analysis.

This design involves the collection and analysis of quantitative and qualitative data differently and mix findings during the result and interpretation phase of the study.

The reason why to use case study design is, 'in Evaluation, we frequently need to know whether programs and projects are being implemented as intended or designed, what problems have been encountered, and what adaptations were made and why. We may want to do such a study when a given project is failing in order to provide a picture of what happened over time and what might be learned from the experience that could be applied to other projects'(108). Case study design involves multiple data collection sources compared to other designs and the design is also feasible in identifying available resource and possible time limits, even though it is not gold standard design of choice, it can provide data with same quality(108).

5.5. Focus of evaluation and dimensions

5.5.1. Focus of evaluation

“The evaluation must be focused to assess the issues of greatest concern to stakeholders while using time and resources as efficiently as possible”(109). Thus, the focus of this evaluation was chosen based on its utility and feasibility. When focusing this evaluation its purpose, users, uses, questions, methods, and agreements were considered. Based on its scope, process evaluation can assess the extent of program implementation (implementation failure or success), quality of program implementation (client-provider interaction and compliance to guidelines), factors that are responsible for the observed degree of implementation and it looks at participation levels and satisfaction (immediate reaction of users and stakeholders)(110). It incorporates patient-reported information on how satisfied patients are with the health care services they have received(111).

The outpatient therapeutic program evaluated was in its implementation stage that this information can be used to better describe program processes, to improve how the program operates, and to fine-tune the overall program strategy in making the evaluation to have the greatest chance of being useful, feasible, ethical, and accurate. Based on its use, the findings of this evaluation will be used by stakeholders, by identifying program areas that need improvement and deciding on resource allocation, that is why users of the evaluation were engaged in deciding on the prioritizing evaluation questions and design. Resource available and the time for data collection also contribute for focus of the evaluation, to be a process.

The program input focuses on programs activities by assessing whether the program is being implemented as intended or not and Facilitators and barriers responsible for observed degree of implementation of the program were assessed for future improvements of the OTP services.

The client-provider interaction part assessed the health providers' compliance status which helps to identify the gap on quality of case management of HEWs about child nutrition and health

The immediate reaction of service users assessed perceived patient satisfaction towards overall SAM care and HEWs and health system related factors that affect patient's satisfaction status.

5.5.2. Dimensions of evaluations

The dimensions of the evaluation were be availability of logistic supplies, facility, therapeutic foods and essential drugs and staff compliance to standard protocols and acceptability towards OTP service

Availability: it is the presence of infrastructures, services, human and material resources required for the implementation of OTP. It refers to the adequacy of the supplies, health care providers and service delivering infrastructures with their respective clients(6).this availability dimension were used to assess availability of health professionals, infrastructures and material resources/supplies/ that are important for the implementation of OTP services.

Compliance of provider: when the services are given according to the national ICCM booklet chart for the management of SAM at OTP sites/ facilities(104) this compliance dimension were used to assess the congruence of provider with national ICCM guidelines while they are assessing, classifying and treating children with SAM and counselling of caretakers.

Acceptability-Conformity to the wishes, desires, and expectations of patients and their families (104).This dimension were used to assess caregivers perspective or client satisfaction towards OTP services. According to WHO (2000), caregivers satisfaction evaluation comprises and answers specific evaluation questions relating to reliability and responsiveness of services, politeness/courtesy and competency of providers and security of records(112).

Conducting caregivers satisfaction help to identify opportunities for program/service improvement; identify caregivers wants as opposed to what staff think and provide feedback to implementers about program effectiveness(113).

5.6. Variables and Indicators

5.6.1. Indicators

Availability (15 indicators)

- ❖ Percentage of health posts with availability of outpatient SAM services.
- ❖ Percentage of health posts with availability of at least one health extension worker.
- ❖ Percentage of health posts with tape water available in their compound.
- ❖ Percentage of health posts with availability of client latrine with water access.
- ❖ Percentage availability of five basic equipment items (MUAC tape, length board, thermometer, height measure and weight scale) in health posts.
- ❖ Percentage of health posts with availability of adequate store room.
- ❖ Percentage availability of six routine medicines (Amoxicillin syrup, Amoxicillin tablet, Zinc, folic acid, ORS and vitamin A) for two months.
- ❖ Percentage availability of plumpy-Nut for at least two months in stock cards.
- ❖ Percentage availability of at least one method of safe final disposal of infectious wastes.
- ❖ Percentage of health posts with availability of safety box.
- ❖ Percentage of health posts with available ICCM booklet chart for OTP services.
- ❖ Percentage of health posts with standard OTP registration books.
- ❖ Percentage of health posts with availability of vehicle for emergency transport
- ❖ Percentage availability of monthly reporting format for at least two months.
- ❖ Percentage of health posts with availability of handwashing facilities

Compliance (17 indicators)

- ❖ Proportion of children assessed for general danger signs (able to drink/breastfeed, vomits everything, had convulsions, lethargy)
- ❖ Proportion of children assessed for all main symptoms (cough/difficult breathing, diarrhea fever and malnutrition)
- ❖ Proportion of children correctly classified for general danger signs
- ❖ Proportion of children correctly classified for pneumonia
- ❖ Proportion of children correctly classified for diarrhea
- ❖ Proportion of children correctly classified for fever
- ❖ Proportion of children correctly classified for malnutrition
- ❖ Proportion of children correctly treated for pneumonia
- ❖ Proportion of children correctly treated for diarrhea
- ❖ Proportion of children correctly treated for fever
- ❖ Proportion of children correctly treated for malnutrition
- ❖ Proportion of children correctly treated and referred for inpatient care

- ❖ Proportion of mothers correctly counselled on malnutrition
- ❖ Proportion of children whose recorded contents of identification is complete.
- ❖ Proportion of children whose recorded contents of admission anthropometry is complete
- ❖ Proportion of children whose recorded contents of discharge anthropometry is complete
- ❖ Percentage of health facilities with at least two supportive supervision reports documented in the last six months.

Acceptability dimension/ caregivers satisfaction (15 indicators)

- ❖ Proportion of mothers who are satisfied with the waiting time to get consultation
- ❖ Proportion of mothers who are satisfied with the length of consultation
- ❖ Proportion of mothers who are satisfied with the convenience to working hour of OTP
- ❖ Proportion of mothers who are satisfied with the convenience to working day of OTP
- ❖ Proportion of mothers who are satisfied with the availability of OTP services when needed
- ❖ Proportion of mothers who are satisfied with the availability of HCPs present when needed
- ❖ Proportion of mothers who are satisfied with the appropriateness of therapy prescribed by the HEW.
- ❖ Proportion of mothers who are satisfied with the cleanliness of equipment used by the health workers
- ❖ Proportion of mothers who are satisfied with the cleanness of the facility
- ❖ Proportion of mothers who are satisfied with the privacy rooms of the facility
- ❖ Proportion of mothers who are satisfied with the personal manner (courtesy, respect, sensitivity, friendliness) of the HCP
- ❖ Proportion of mothers who are satisfied with the clearness and completeness of explanation given to you about Dx and Rx.
- ❖ Proportion of mothers who are satisfied with the completeness of the information given to you about the diagnosis and treatment.
- ❖ Proportion of mothers who are satisfied with the competence of the health worker you attended
- ❖ Proportion of mothers who are satisfied with the overall OTP services

5.6.2. Dependent and independent Variables

5.6.2.1. Dependent variables

- patient satisfaction on overall OTP services

5.6.2.2. Independent variables

A. Socio-demographic information

- Age
- Sex
- address
- Occupation
- employment status
- Marital status
- Religion
- ethnicity
- Educational status
- house hold income

B. Health system related issues

- location of HP
- distance travelled in minutes
- method of transport
- Convenience to attend OTP weekly
- Convenience of working hour of OTP service
- Time spent to reach HP

5.7. Populations and sampling:

5.7.1. Source of population

- All caregivers and their children who come to the selected HPs during data collection period.
- All health posts, OTP program documents and OTP registers since 2018 in Konso Special Woreda for quantitative study.
- Head of health centers, head of woreda health office and HEWs assigned and working in government health posts of Konso Special Woreda for qualitative study.

5.7.3. Study population

- It includes, sampled caregivers and their children, sampled HPs, six months administrative records(supportive supervision reports, OTP plan, OTP monthly performance reports), two months back record of children in the OTP registration books a day before the date of data collection period for quantitative study. Selected heads of health centers, head of woreda health office and sampled HEWs working at the selected HPs and who have a work

experience of a year or more in government health facilities of Konso Special Woreda for qualitative study.

5.7.4. Study units and sampling units

5.7.4.1. Study units:

- Are the actual data sources of the evaluation include, caregivers, OTP registration books, administrative documents, heads of health centers and head of woreda health office and HEWs of the selected health posts of Konso Special Woreda

5.7.4.2. Sampling units:

- **Primary Sampling units:** caregivers and their children of 6-59 months, heads of HCs and head of woreda health office and health extension workers of the 20 health facilities.
- **Secondary Sampling units-** all government health posts of Konso Special Woreda
- **Final unit of analysis** - the outpatient therapeutic program of Konso Special Woreda

5.7.5. Sample size determination and sampling technique

A. Sample size for health facility

WHO suggested that a minimum of 30% and maximum of 50% of sample size for a health facility of 40-59 depend on the number of health facilities, availability of funds and human resources(114).based on this guideline, 50% of the forty functional health posts were included based on their recent six months OTP performance report of 2017 randomly. A total of 20 HPs providing OTP services at Konso Special Woreda were included in the sample.

B. Sample size to assess availability of resources

Sample size for resource inventory

Facility audit were done on the twenty selected HPs on Availability of resources (drugs, RUTF, basic amenities, IP, job aids etc.) and infrastructures like water supply availability were counted and checked to assess the presence of the minimum required resources. Face to face dialogue were conducted with HEWs to identify the reasons for not available resources.

Document review

Stock balance card was reviewed for the availability of drugs, RUTF, reporting formats and OTP registration books in the HPs from the first day of data collection to the next two months period to check whether there is or no adequacy of the resources for implementation of OTP.

Two months back OTP Registration books records were reviewed in the twenty HPs to check content completeness. A total of 20 OTP registration books with 104 SAM children registered were checked for content completeness of recording as guideline in the selected HPs.

OTP performance report, financial and plan documents, supportive supervision reports were reviewed six months back from the study period in the 20 HPs to ensure that whether the program is implemented with appropriate technical and administrative resources.

Sample size for staff compliance to SAM guideline on SAM service provided

Sample size for direct observation

There were about 45 HEWs at the 20 health posts who were providing care at health posts and community, by excluding HEWs who were at the community, HEWs who were present and actively providing care at the day of visit were listed 1 to N from each health post and one HEW were selected randomly from each of the 20 HPs selected. Thus, 20 HEWs were included to participate in the direct observation. Six client provider interaction observations were observed. To decrease hawthorn effect the first two observations were excluded from the analysis. Four direct observations at the beginning and two observations on the last client in the next working day were conducted with a gross total of 120 observations. By excluding the first two observations from the analysis a total of 80 observation sessions were conducted.

Finally, 80 caregivers and their children 6-59 months attended in the selected HPs of Konso Special Woreda who had attended OTP clinic and eligible within the study period were included until the required sample is reached.

Sample size for in-depth interview-“The sample size to be used for interviewing facility staff must be at least as big as the facility sample but probably larger”(115). Based on this recommendation, 20 in-depth interview with HEWs who had working experience of a year and more were selected purposively to assess the facilitators and barriers of implementing OTP services at the PHCUs of Konso Special woreda. Totally 20 in-depth interviewees were conducted.

Key informants' interview: Key informants interview with Konso Special Woreda health office head and four heads of health centers responsible for supervising the 20 HPs were interviewed for the administrative and technical aspects of the program to address the reasons for success and failures of the program. Key informant were selected purposively based on their position or purpose (being head of woreda health office and head of health center).totally, 5 KII were conducted.

Sample size to acceptability of services

Sample size for client exit interviews:

The sample size determined by using single population proportion formula, from a study of patient satisfaction in Sidama district(68) by considering P=58% , 95% confidence level and 0.05 margin of error:

$$n = \frac{(z_{\alpha/2})^2 p(1-P)}{d^2} \qquad 3.8419 \times \frac{0.58(0.42)}{0.0025} = 374$$

Where:

n= the maximum possible sample size

Z_{α/2} = standard score for 95% confidence level

d²= margin of error of 0.05

P= 58% patients who are satisfied by the OTP service given in study done on Primary Health Care & Utilization of services in Sidama district(68) .By considering 10% non-response rate the total sample size was 411. All caregivers of children 6-59 months children in selected HPs of Konso Special Woreda who had attended OTP clinic within the study period were included consecutively until the required sample is reached. To assess their level of satisfaction participants were asked whether they are satisfied or not with service provided today and finally their level of satisfaction or dissatisfaction were asked to rated their satisfaction or dissatisfaction

5.7.6. Sampling procedure/ technique

The study sample selection employed all public health posts implementing OTP in Konso Special Woreda were included in the evaluation.

Sampling procedure for selection of health posts.

To conduct facility audit, inventory checklist were used to collect information about availability supplies, equipment, health staff, essential drugs and material cards followed by direct observation of availability and functionality of the above mentioned supplies.

According to Konso Special Woreda 2017 report, health HPs in the woreda were classified according to their level of OTP performance into two based on whether they had achieved previous OTP performance or not, i.e., using $< 75\%$ and $\geq 75\%$ as cut off point for HPs performance and we selected 20 HPs in both category randomly proportional to the number of HPs within it. Diagrammatic presentation of the sampling procedure was as follows.

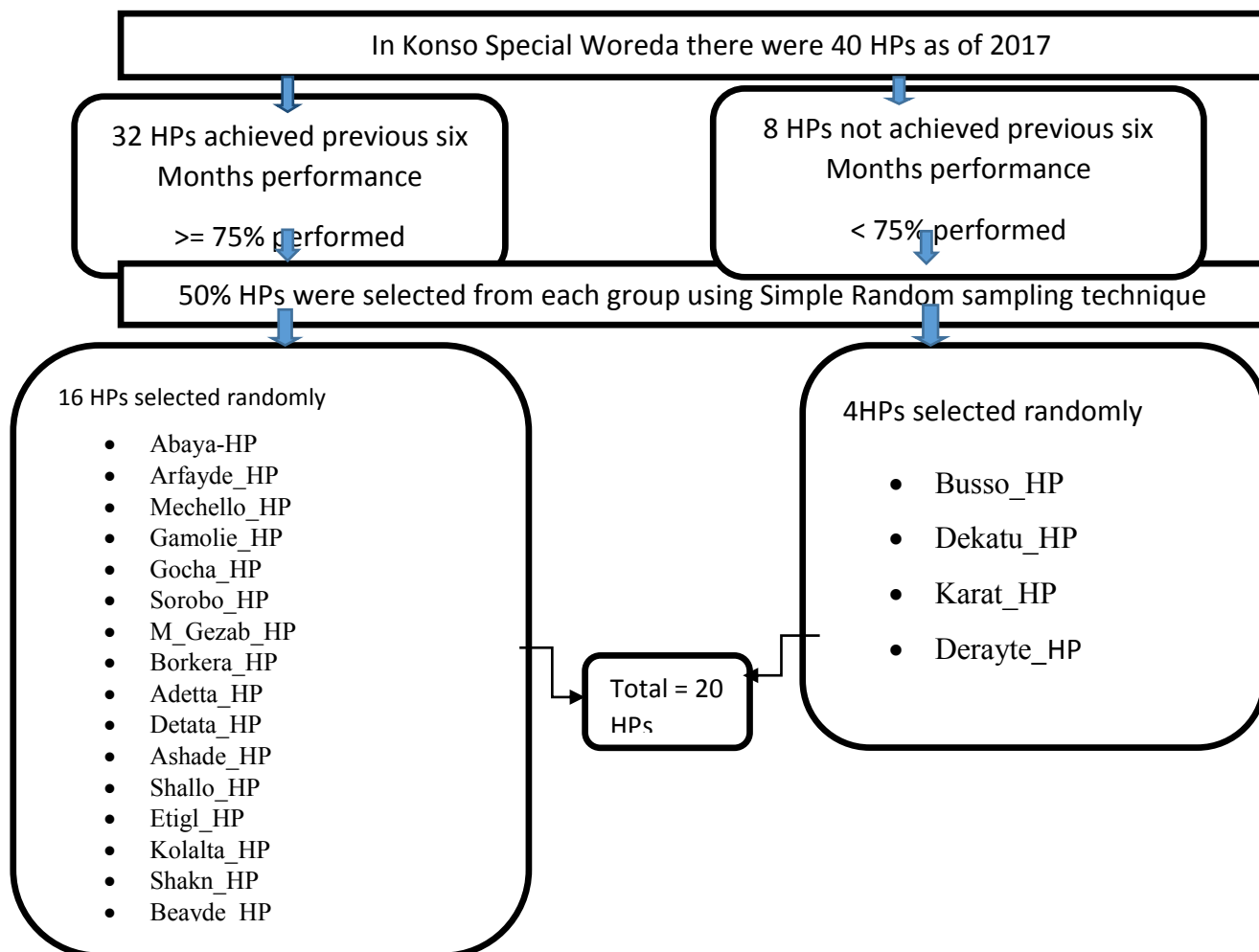


Figure 4-schematic presentation of sampling procedure in HPs of Konso Special Woreda, 2018

Resource inventory

At convenient time for head of the health posts were interviewed to assess the availability of resource for OTP service using inventory checklists. All the data concerning structure was observed and when necessary concerned body were interviewed for not availability of resources to describe why for not available items in the HPs surveyed.

Document review

The availability of drugs, RUTF, reporting formats and OTP registration books were reviewed in Stock balance cards in the HPs from the first day of data collection to the next two months period to check the adequacy of the availability of drugs, RUTF, reporting formats and OTP registration books in the selected HPs.

OTP performance report, financial and plan documents, supportive supervision reports were reviewed six months back from the study period in the 20 HPs to ensure that whether the program is implemented with appropriate technical and administrative resources.

Finally, Two months back OTP Registration book of 20 health posts were reviewed a day before date of data collection period. A total of 20 OTP registration books with 104 SAM children registered and discharged were included to check for content completeness of recordings in the registration books.

In-depth interview of health extension workers – All HEWs who work experience of greater than one year were included purposively to get rich information about barriers and facilitators of implementation. They were selected for the reason that they were more relevant information sources for the issues related to OTP services such as availability resources and the strength and weakness of the implementation status the program. Finally, 20 HEWs were included.

Direct observation

The sample of health extension workers was selected from those who were present in the facility on day of visit and who provided services. One HEW were randomly selected from each health post based on their presence and actively providing care at health posts at day of visit. So, that the 20 HEWs were included in the sample. HEWs were assigned and working in OTP before data being collected. The survey team met with the HEWs and introduced themselves and explained the purpose of the visit (emphasizing that results would be used to assess and improve health services—not to individually assess or punish HEWs).The supervisors asked each HEW to give verbal consent to participate in the study. The survey team explained that after patients were re-examined, the treatments prescribed to the patient and other care may be altered if the HEW's prescription was not consistent with the gold standard re-examination. The data were collected at day time from the eligible sampled participants.

Enrolling children: As patients arrived at the health post, the supervisor screened the children for eligibility. If the child was eligible (at least one of the four main symptoms), the supervisor read the informed consent to the caretaker in Amharic and requested verbal consent.

Observation of the consultation: The observer silently observed the consultation process of the HEW with eligible caregivers and used the Observation Checklist to record the HEW's assessment, classification, treatment, and counseling of the patient. The first two consecutive

caregivers with health care provider interaction in each sampled health facilities were selected purposely.

Client exit interviews: The selected 20 HPs were considered in the sampling process. The total sample size (N= 411) were proportionally allocated by average daily client flow for each health post. The average daily client volume was 8 per day in the 20 HPs. according to sampling manual for health facility survey(116), the daily client volume was eight which is in the 6-10 range that sample should be taken every two patient interval by listing the first two caregivers 1 to N and selecting a start number. The start number was 2 and sample were taken every 2th until the required sample size is reached. Finally, 411 clients were interviewed about health system, HEWs and caregivers related factors.

5.7.7. Inclusion and exclusion criteria

The Inclusion criteria

- ❖ Functional health posts (providing OTP services) of Konso Special Woreda.
- ❖ Health extension workers available at date of data collection.
- ❖ Caregivers who received service at selected health posts during data collection.

The exclusion criteria

- ❖ Health post with less than one year OTP service.

5.8. Data collection

All the required data were collected from March/19/3 /2018/- April 20/4/ 2018G.C, two months retrospective review of records of children in OTP registration books with SAM discharged from OTP a day before the date of data collection day using structured data extraction format. Availability of supervision, work plan, OTP performance report, financial reports documented in the last six months from study period using compilation format.

Facility observation and resource inventory were conducted on all selected facilities to assess readiness of facility to provide SAM services. Using inventory and observation checklists in-depth interview were conducted with HEWs working at OTP to assess success and failure related barriers that will affect implementation process and key informant interview were conducted with woreda health office head and head of health centers to assess the facilitators and barriers of implementation of OTP services. Finally, direct observation of twenty HEWs with clients while prescribing a practice were collected using observation checklist.

5.8.1. Data Collection methods

In order to address the evaluation questions both Qualitative and quantitative methods of data collection methods were employed. However, the method that is favored in some branches of social science is qualitative and interpretive, but it doesn't mean the different form of data

collection techniques are mutually exclusive. Case study research, in particular, favors the use of multiple data sources and methods of analysis(117).

The data collection methods used for quantitative and qualitative technique were in-depth interview, document review, Observation, KII and client exit interview.

5.8.2. Development of data collection tools

Data collection tool for in-depth interview and KII

A data collection tool for Key informant in-depth interview was prepared to assess the implementation related barriers of OTP care activities, facilitators, challenges and solutions of implementation of OTP program. This tool was adopted from the community therapeutic care field manual with some modifications (118). KII information was collected from head of the woreda health office and four heads of health centers. In-depth interview information were collected from health extension workers who had working experience of greater than one year. Purposive sampling technique was employed for this type of data collection methods to get rich information.

Data collection tool for direct staff observation- is used to assess adherence of staff to guideline while health care providers are prescribing practice on the management of SAM. The tool was adopted with modification from “the training guide for the management of acute malnutrition” prepared in collaboration of USAID, valid international and concern worldwide, AED and UNICEF since 2008(47)

The observation checklist consists of questions to assess providers’ compliance during assessment, classification, treatment of children and counselling their respective caregivers.

Four client-provider interaction observations were conducted at the beginning and two client-provider interaction observations in the next working day for each health care provider. Out of the total 120 client-provider interaction observation sessions, 80 observation sessions were used for analysis by excluding the first two observations from all health care providers to minimize Hawthorn effect.

Data compilation form for document review

A data compilation form was prepared to review charts of children admitted and treated at OTP in the selected HFs six months back from study period. The data Extraction format was adopted with little modification from the children’s OTP chart of training course on the management of severe acute malnutrition by FMOH 2013(119).

The compilation form consists of children characteristics/ condition at (admission, re-admission follow up, discharge) and monthly statics report of OTP six months back from the start of data collection period, which consists of monthly admission and discharge status

report of children in the program. Finally, data was extracted after permission is given from the responsible authorities.

Data collection tool for Resource Inventory and direct observation of facility using checklist

Resource inventory that combines both direct observation and dialogue with responsible bodies such as head of health post conducted at all the 20 HPs.

The inventory tool was used to assess readiness of facility to provide SAM services, related to availability of human and material resources, drug supplies and equipment and availability of structures to run the OTP services. Information was obtained from head of health post/facility using semi-structured checklist which was prepared from “The Management of Severe Acute Malnutrition: A Suggested Manual for Ethiopia” since 2003 by UNICEF(120).

Data collection tool for client satisfaction

Clients completed structured Visit Rating Questionnaire (VRQ) containing 15 items as they leave the health posts. The questionnaire consists of Accessibility (waiting time, duration of consultation, and convenience of OTP working day to approach health extension workers, Humanness (conduct, respect and friendliness) of HEWs, diagnosis and treatment and drug use, Competence of the HEWs and Overall quality of care received. Taken from Client Satisfaction, Primary Health Care & Utilization of services in Sidama district with modification (68). This tool was translated in to Amharic language and back to English to validate its consistency.

This questionnaire were pre-tested in the neighboring Arba minch woreda at Arba minch town health post with 5% (8) of the total sample size during pre-test we checked sequential problems, understandability and clarity of questions and make overall amendments accordingly

5.8.2 Data collectors

Five data collectors and two supervisors who had a minimum of 1(one) years’ work experience on the provision of OTP service and trained on SAM service were recruited to participate in data collection.

The supervisors were BSc holder in nursing fields and enumerators had a nursing diploma and had worked in OTP for a minimum of one year.

Data collectors were selected from other than the study health facility to minimize information bias. two days training were given for data collectors and supervisors on the content of the data to be collected, data collection instruments, data collection techniques,

ethical issues to be addressed during gathering data, communication and interview skill, how to use the data collection guide and tools and on how to manage data collection process and the way to monitor the quality of data by principal evaluator. The training was given in the same session in order to familiarize data collectors and supervisors with data collection tools. They participated only on satisfaction survey and direct observation of client provider's interaction.

In-depth interviews, data compilation from charts and resource inventory were conducted by the principal evaluator and informed consent was obtained from all HEWs and caregivers who participated in the study

5.8.3. Data collection field work

Data were collected from each health post through:

Document review-two months back of OTP registration books and six months of records and reports of supportive supervision.

Direct observation-the observation was conducted while HEWs assess, classify, treatment and referral of children at OTP and counselling their caregivers. Initially, the observers took informed consent from the HEWs and then the HEWs took consent from clients in each session. The first two observations were dropped from the analysis in order to minimize Hawthorne effect. Finally, four observation/HEW/HP was conducted in the twenty HPs.

Client exit interview- it was conducted after client received OTP care while they exit from the HPs every two patients of sampling interval until the required sample size is fulfilled.

Resource inventory- the resource inventory combines both direct observation and face to face dialogue with head of health posts. In the process 20 heads of HPs were interviewed.

5.9 Quality Control/ assurance

Data collectors reached the study area on time. The data collection tools and procedures used in this study were pre-tested in Arba minch town health post. The pre-test helped to correct areas of inconsistency, ambiguity, comprehension and exhaustiveness. Data collectors were trained for two days. Interview guides were translated into the local language for the purpose of simplicity. Furthermore, to ensure, the completeness of data, principal evaluator supervised each day of data collection. During data collection, regular supervision were conducted daily.

5.10. Data management and analysis

- Quantitative data were checked for completeness, edited, coded, entered and analysed using SPSS version 20.0.
- Descriptive summary were done using tables, proportion and figures.
- Qualitative data were categorized thematically and supplemented the quantitative findings.
- Finally the dimensions of OTP services were judged based on the judgment matrix

5.10.1. Data entry

- Data from the field were entered upon generation. Quantitative data entered in to epi-data, while qualitative data coded, transcribed and analyzed manually using thematic analysis.

5.10.2. Data cleaning

Incomplete, inconsistent and invalid data were refined properly to get maximum quality of data before, during and after data entry. Corrections made according to the original data.

5.10.3. Data analysis

All quantitative data were analysed using SPSS for windows version 20 descriptive analysis using mean, frequencies and measures of dispersion were carried out to assess the level of implementation of the program using judgement matrix.

The data was entered with the response categories coded in numbers, ranging from 5 (highest score) to 1 (lowest score). To see the total score of each respondent, the points obtained from the fifteen likert scale items were summed by each respondent. Using demarcation threshold formula $\{ \text{total highest score} - \text{total lowest score} \} / 2 + \text{lowest score}$.clients were categorized as satisfied or not satisfied. The cut off point for client satisfaction on OTP service was 48(29, 67).

For the convenience of analysis, re-coding of scales was done to dichotomise the results. Clients who marked score 1 and 2 were considered as 'satisfied' and re-coded as 1., while scores marked from 3-5 as 'not satisfied' and re-coded as 0. However, not satisfied should not necessarily mean dissatisfied, since the neutral categories included in this group. For each dependent variable bivariate and multivariate analysis were done to see relations with independent variables

By using principal factor analysis method, the adequacy of sample size determined using Kaiser-Meyer-Olkin (KMO) test. KMO value closer to one will be considered useful for factor analysis and less than 0.5 will not be appropriate for analysis due to inadequate sample size(121,122).

For factor extraction, Kaiser-Guttman rule, accordingly three factors/ components with eigen value > 1 was identified and used to explain predictors of staff compliance and the

relationship between variables will be determined using factor loading where, factor loading greater than 0.4 were taken as variables related to factor and less than 0.3 was considered no association, it was discarded and make it's unique factor(121,122).

By transformation of ordinal scale to nominal scale, the three components/ factors that are extracted by factor analysis was dichotomized in to agree and disagree for attitude on sufficiency of resources and determinants of compliance, usually and not at all for practice of HCPs by using cut of point calculated using demarcation threshold formula $(\text{total highest score} - \text{total lowest score})/2 + \text{total lowest score}$. Then, health providers will be categorized as with compliance or non-compliance based on quality of compliance dimension using judgement matrix.

To determine factors that may influence HCPs adherence to guideline, the association between dependent and independent determined using bivariate logistic regression with 95 % confidence interval. The variables with $p < 0.25$ were considered as candidate for multiple logistic regression. Multiple logistic regression were employed to control the potential confounders using AOR. Cut off point will be $p < 0.05$. finally, the results were judged based on judgement matrix of analysis with the dimensions formulated and indicators.

Qualitative data analysed by using within-case analysis technique. Where, detailed case study was prepared for each HPs to identify possible reasons for difference and matching different HPs to identify possible reasons for similarity.

Finally, based on the findings of each HP final case report prepared .the analysis of quality within the program was done using judgement matrix of analysis with the dimensions formulated and indicators.

5.11. Matrix of analysis and judgment

Almost every research activity involves a certain degree of judgment. In evaluation, these judgments are sensitive and usually may be linked to immediate actions. As a result, evaluations try to develop a more explicit plan to make judgments. Making such a careful judgment requires developing, with stakeholders, how judgment was made. For an evaluation involving multiple dimensions and multiple indicators, this step requires –assigning weights to the different dimensions and indicators and setting cut of points to make judgments. Based on the above facts, stakeholders with principal evaluator prepared cut-off points for each dimensions and the overall process evaluation of the OTP Program in Konso Special Woreda.2018.

The overall weight is distributed to the three dimensions proportionally based on the number of indicators with in each dimension.

Finally, to make evaluative judgement on the process evaluation of OTP program, the sum of the achieved value in each dimension compared with overall judgement criteria, then we decide on overall process evaluation of OTP program. The judgement parameters to each dimension is presented on the following table.

Table 3. judgment parameter of OTP implementation status process evaluation at KSW,2018.

Judgment level	Parameter	definition
Implemented Excellent implementation	$\geq 90\%$.	Current achievement on OTP service is in line with pre-setted objectives and need to be continued
Very good or Partially implemented	75-89%.	Major areas in the implementation needs to be revised and modified
good implementation poorly implemented	60-74 %	Major and minor areas of the program implementation needs urgent revision and improvement
Poor, not implemented	$<60\%$	The program plan, strategies and implementation needs very urgent revision and improvement

N.B. Judgment levels

$\geq 90\%$ = excellent (implemented), 75-89 % =Very good (partially implemented), 60-74 % = good (poorly implemented), $< 60\%$ = poor (not implemented).

5.12. Ethical issues

Ethical clearance were received from Jimma University, Ethical review board. Permission (support letter) were taken from SNNPR health department and konso special woreda health office. Informed verbal consent were obtained from the study subjects, by explaining the purpose of the interview and benefits from participation. In addition participants were informed that participation is voluntary and that they will have full autonomy to with draw the participation at any time they feel so. Names and other personal information which can affect the confidentiality of the respondents was not taken or recorded rather codes may be used. The information taken is kept confidential and only used for evaluation purpose.

5.13. Evaluation dissemination

The finding of this evaluation was presented to the Jimma University, Institute of health and department of health Economics, management and policy. Health monitoring and evaluation unit. In addition the result will be communicated with Segen Peoples zone health department, Karat town administrative health office, and other stakeholders and partners working on the OTP program and other stakeholders. This evaluation will be disseminated to stakeholders through soft copy and hardcopy as it will help them to identify their area of strength and weakness and use it for their performance improvement. Finally, sending the evaluation finding to national or international scientific journal for publication will be considered.

Chapter-6. Result

6.1. Availability dimension

The study was conducted in twenty health posts of Konso Special Woreda. Accordingly the results of this evaluation indicates that all of the health posts were providing OTP service for the community on daily basis in all health posts of Konso Special Woreda. Moreover, the proportion of health posts with client latrine and store room was available in all the HPs surveyed.

Percentage of health posts with tape water available in their compound was one of the indicators of availability dimension, based on this study, tape water was available in 11(55%) of health posts surveyed. Improved water source was not available in 9(45%) of the health posts. The reason why tape water is not available was due to “...A 40 years old male key informant, said, “....we have budget constraint to build improved water source for each health posts in our woreda, now we are working with the help of Italian government to construct water tankers near to each clinic that rain water will be collected from the corrugated iron sheets of the health post and collected in a tanker which the water will be disinfected and used when needed. We hoping that all health posts will have improved water source by the end of this year.”

Percentage of health posts with availability of vehicle for emergency transport was one of the availability indicators. Based on this study, availability of emergency transport at or that operates from another facility in near proximity, which is available in 17(85%) percent of health posts surveyed. But, emergency transport was not available at all in Arfayde health post, Adetta health post and Detata health posts. The reason why it was not available “...a 30 years old male key informant from one of the health centers said that...we are facing a problem in transporting clients from health posts to the immediate referral health centers that the previously used ambulance is not functional that we send it for maintenance and in the meantime emergency transportation will be started”. Moreover, the mean availability five tracer items of basic amenities is presented in the table below.

Table 4. mean availability of five basic amenities tracer items as percentage in KSW, 2018.

S.No	Name of HPs	OTP service	Tape water	Client latrine	emergency transport	Store room	Mean availability of tracer items	percentage availability of all items
1	Abaya Health post	1	0	1	1	1	4	0
2	Adetta Health post	1	0	1	0	1	3	0
3	Arfayde Health post	1	0	1	0	1	3	0
4	Ashade Health post	1	0	1	1	1	4	0
5	Beayde Health post	1	0	1	1	1	4	0
6	Borkera Health post	1	0	1	1	1	4	0
7	Busso Health post	1	0	1	1	1	4	0
8	Dekatu Health post	1	0	1	1	1	4	0
9	Derayte Health post	1	1	1	1	1	5	1
10	Detata Health post	1	1	1	0	1	4	0
11	Etiglie Health post	1	1	1	1	1	5	1
12	Gamolie Health post	1	1	1	1	1	5	1
13	Gocha Health post	1	1	1	1	1	5	1
14	Karat Health post	1	0	1	1	1	4	0
15	Kolalta Health post	1	1	1	1	1	5	1
16	M/Gezaba Health post	1	1	1	1	1	5	1
17	Mechello Health post	1	1	1	1	1	5	1
18	Shakona Health post	1	1	1	1	1	5	1
19	Shallo Health post	1	1	1	1	1	5	1
20	Sorobo Health post	1	1	1	1	1	5	1
Total	availability Of tracer items	20	11	20	17	20	88	10
	Percentage availability Of tracer items	100	55	100	85	100	88	50

The above table, shows that 100%, 55%, 100%, 85% and 100% of health posts have outpatient SAM services, tape water, client latrine, emergency transport and store room respectively with mean availability of basic amenities of 88% and 50% of health posts with availability of all tracer items in the domain.

Percentage of health posts with availability of at least one health extension worker was one of the indicators on availability dimension. According to this study there were 49(100%) HEWs at the beginning of the year 2017. Of these, 44(90%) of HEWs received in-service training, 41(84%) of HEWs were at service during data collection and 8(16%) of HEWs left the

facility with mean availability of two HEWs per facility in the twenty health posts of the woreda.

To assess the Percentage availability of six routine medicines, availability of Amoxicillin syrup, Amoxicillin tablet, ORS, folic acid, vitamin A and Zinc sulphate were checked at stock. Accordingly, 20(100%) of HPs had vitamin “A” capsules, 17(85%) had folic acid, only 5(25%) of health posts had Oral Rehydration Salt (ORS), 6(30%) of health posts had amoxicillin tables, 15(75%) of health posts had amoxicillin syrup. But, zinc sulfate was not available in all the health posts surveyed. The reason why Zinc was not available was “...There were stock out of Zinc at the woreda level that children with diarrhea are not getting Zinc in the health posts that we are requesting the supply from the woreda...as replayed by a 34 years old female key informant of head of referral link of the health post”.

Of all the tracer items in the 20 health posts, the mean availability and percentage availability of all tracer items in the domain was 52.5 % and 0% respectively. Moreover, the percentage availability of essential drugs in the twenty health posts is described by the graph and table below.

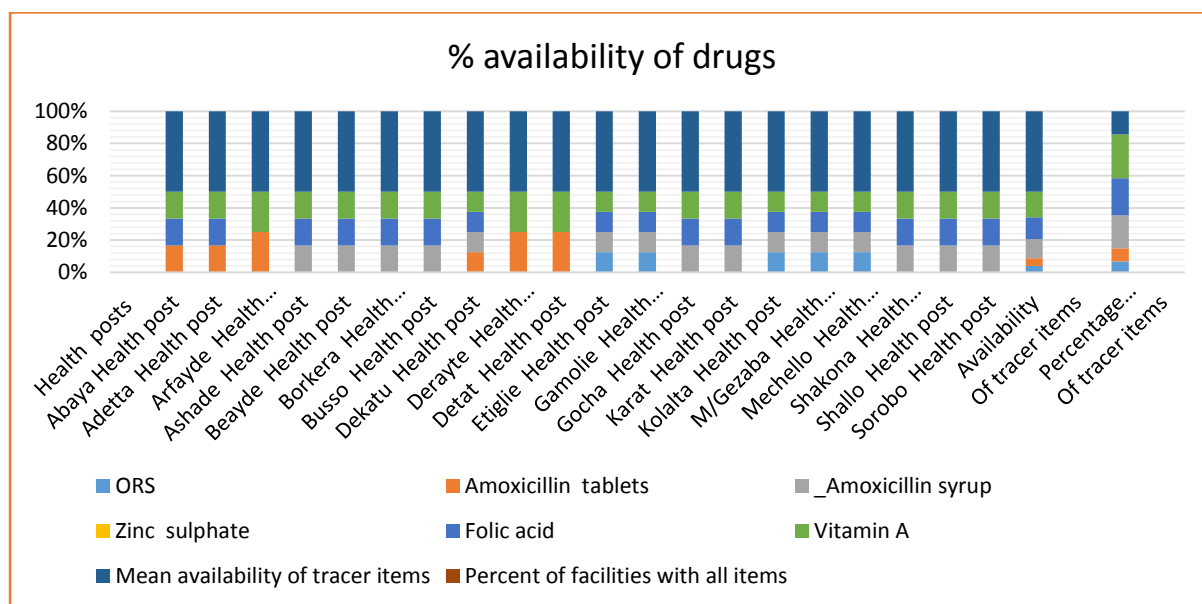


Figure 5. percentage availability of drugs by name of HPs in KSW, 2018

Table 5. availability of routine medications for OTP evaluation at KSW,2018

S.No	Name of Health posts	List of availability of essential drugs with mean & % availability							
		ORS	Amoxicillin tablets	Amoxicillin syrup	Zinc sulphate	Folic acid	Vitamin A	Mean availability of tracer	Percent of facilities with all items
1	Abaya Health post	0	1	0	0	1	1	3	0
2	Adetta Health post	0	1	0	0	1	1	3	0
3	Arfayde Health post	0	1	0	0	0	1	2	0
4	Ashade Health post	0	0	1	0	1	1	3	0
5	Beayde Health post	0	0	1	0	1	1	3	0
6	Borkera Health post	0	0	1	0	1	1	3	0
7	Busso Health post	0	0	1	0	1	1	3	0
8	Dekatu Health post	0	1	1	0	1	1	4	0
9	Derayte Health post	0	1	0	0	0	1	2	0
10	Detat Health post	0	1	0	0	0	1	2	0
11	Etiglie Health post	1	0	1	0	1	1	4	0
12	Gamolie Health post	1	0	1	0	1	1	4	0
13	Gocha Health post	0	0	1	0	1	1	3	0
14	Karat Health post	0	0	1	0	1	1	3	0
15	Kolalta Health post	1	0	1	0	1	1	4	0
16	M/Gezaba Health post	1	0	1	0	1	1	4	0
17	Mechello Health post	1	0	1	0	1	1	4	0
18	Shakona Health post	0	0	1	0	1	1	3	0
19	Shallo Health post	0	0	1	0	1	1	3	0
20	Sorobo Health post	0	0	1	0	1	1	3	0
Total	Availability Of tracer items	5	6	15	0	17	20	63	0
	Percentage availability Of tracer items	25	30	75	0	85	100	52.5	0

The above table shows that 25 %, 30%, 75%, 0%, 85%, 100% of health posts had ORS, Amoxicillin tablets, Amoxicillin syrup, Zinc sulphate, Folic acid and Vitamin A respectively with mean availability of essential drugs of 52.5% and 0% availability of all tracer items in the domain.

Percentage availability of five basic equipment items was one of the indicators of the availability dimension, accordingly, Out of the five tracer basic medical equipment items assessed, 4(80%) tracer items were available in the twenty health posts with the mean availability of 92% of tracer item in the domain and 70%(14) of health posts had all items in the tracer domain .However, thermometer was the least available medical equipment which

was not available at all in Etiglie, Kolalta, Gamolie, M/Gezaba, Mechello and Shakona Health posts which covers 30% of health posts. The reason why thermometer was not available in the six health posts “.....a 34 years old HEW from one health post said...The woreda health office could not provide us based on our request”. Moreover, proportion of basic equipment tracer items in the twenty health posts is presented in the table below.

Table 6 proportion of basic equipment items for the implementation of OTP at KSW by facility type, 2018

S.No	Health posts	Wt_scale of 25 Kg	_MUAC_tape *5	_length_board	standing_Ht_measure	Thermometer *3	Mean availability of tracer items	Percent of facilities with all items
1	Abaya Health post	1	5	1	1	3	11	1
2	Adetta Health post	1	5	1	1	3	11	1
3	Arfayde Health post	1	5	1	1	3	11	1
4	Ashade Health post	1	5	1	1	3	11	1
5	Beayde Health post	1	5	1	1	3	11	1
6	Borkera Health post	1	5	1	1	3	11	1
7	Busso Health post	1	5	1	1	3	11	1
8	Dekatu Health post	1	5	1	1	3	11	1
9	Derayte Health post	1	5	1	1	3	11	1
10	Detat Health post	1	5	1	1	3	11	1
11	Etiglie Health post	1	5	1	1	0	8	0
12	Gamolie Health post	1	5	1	1	0	8	0
13	Gocha Health post	1	5	1	1	3	11	1
14	Karat Health post	1	5	1	1	3	11	1
15	Kolalta Health post	1	5	1	1	0	8	0
16	M/Gezaba Health post	1	5	1	1	0	8	0
17	Mechello Health post	1	5	1	1	0	8	0
18	Shakona Health post	1	5	1	1	0	8	0
19	Shallo Health post	1	5	1	1	3	11	1
20	Sorobo Health post	1	5	1	1	3	11	1
Total	availability of tracer items	20	100	20	20	42	202	14
	Percentage availability of tracer items	100	100	100	100	70	92	70

N.B. “0” represents the item is not available and “1” represents the item is available

In the case of number of HPs with availability of sanitation facilities (soap and running water for handwashing), this evaluation revealed that, 15(75%) of health posts had handwashing

facilities. But, 5(25%) of health posts such as, Abaya, Adetta, Detata, Derayte and Arfayde health posts hadn't functional sanitation facilities in their compound.

Percentage of health posts with availability of safety box was one of the indicators availability dimension, accordingly, 15(75%) of health posts had safety box and the rest 5(25%) HPs hadn't safety box at the time of data collection.

In the case of Percentage availability of at least one method of safe final disposal of infectious wastes, none of the health posts had availability of Safe final disposal of infectious wastes such as incinerator or open burning in protected area in their health post at the date of data collection in the twenty health posts. The reason why not available was due to the fact that *"..... a 36 years old key informant from one of the health centers said that since most health posts were established in the last 3 years safe final disposal of infectious waste was not included while construction of the health posts now we recognize that safe final disposal of infectious waste is vital for all health posts but due to budget constraint we don't establish infection precaution standards and we instruct HEWs to use the nearest health facility until the problem is solved"* furthermore *".....a 35 years old female HEW from one of the health posts said, "we use the nearest health center or facility to final disposal of waste"*. Moreover, the availability of standard precautions for IP is presented in the table below.

Table 7. mean availability of standard precautions evaluation of OTP at KSW, 2018.

S.No	Health posts	Final Disposal of waste	Safety box	Sanitation facilities	Mean availability of tracer items	Percent of facilities with all items
1	Abaya Health post	0	0	0	0	0
2	Adetta Health post	0	0	0	0	0
3	Arfayde Health post	0	0	0	0	0
4	Ashade Health post	0	1	1	2	0
5	Beayde Health post	0	1	1	2	0
6	Borkera Health post	0	1	1	2	0
7	Busso Health post	0	1	1	2	0
8	Dekatu Health post	0	1	1	2	0
9	Derayte Health post	0	0	0	0	0
10	Detat Health post	0	0	0	0	0
11	Etiglie Health post	0	1	1	2	0
12	Gamolie Health post	0	1	1	2	0
13	Gocha Health post	0	1	1	2	0

14	Karat Health post	0	1	1	2	0
15	Kolalta Health post	0	1	1	2	0
16	M/Gezaba Health post	0	1	1	2	0
17	Mechello Health post	0	1	1	2	0
18	Shakona Health post	0	1	1	2	0
19	Shallo Health post	0	1	1	2	0
20	Sorobo Health post	0	1	1	2	0
Total	availability of tracer items	0	15	15	30	0
	Percentage availability of tracer items	0%	75%	75%	50%	0%

The above table showed that 0% ,75% and 75% health posts had safe final disposal of wastes ,Safety box and Sanitation facilities respectively with 50% of mean of availability of standard precautions and 0% of percentage of availability of all tracer items in the domain.

In the case of the percentage availability of monthly reporting format, according to this study, none of health posts had HMIS reporting format. The reason why is was not available “.....a 33 years old female HEW said, “.....the woreda health office could not provide us the reporting formats for the last four months, we use plain paper for reporting purpose”. Moreover, the percentage of HPs with availability of OTP registration books and SAM booklet chart was available in all the 20 HPs with 100% of availability.

Table 8.mean availability of tracer items for Job aids of evaluation of OTP at KSW,2018.

S.No	Health posts	ICCM booklet chart	Registration book	Reporting format	Mean availability of tracer items	Percent of facilities with all items
1	Abaya Health post	1	1	0	2	0
2	Adetta Health post	1	1	0	2	0
3	Arfayde Health post	1	1	0	2	0
4	Ashade Health post	1	1	0	2	0
5	Beayde Health post	1	1	0	2	0
6	Borkera Health post	1	1	0	2	0
7	Busso Health post	1	1	0	2	0
8	Dekatu Health post	1	1	0	2	0
9	Derayte Health post	1	1	0	2	0
10	Detat Health post	1	1	0	2	0
11	Etiglie Health post	1	1	0	2	0
12	Gamolie Health post	1	1	0	2	0
13	Gocha Health post	1	1	0	2	0
14	Karat Health post	1	1	0	2	0
15	Kolalta Health post	1	1	0	2	0

16	M/Gezaba Health post	1	1	0	2	0
17	Mechello Health post	1	1	0	2	0
18	Shakona Health post	1	1	0	2	0
19	Shallo Health post	1	1	0	2	0
20	Sorobo Health post	1	1	0	2	0
Total	availability of tracer items	20	20	0	40	0
	Percentage availability of tracer items	100	100	0	66	0

The above table shows that 100%, 100% and 0% of health posts had booklet chart, OTP registration books and reporting format respectively with mean of availability of 66% and percentage availability of all tracer items in the domain as 0%

6.1.1. General Service availability summary score for all domains

The assessment shows that the general service readiness index was 74 percent, implying that 74 percent of all health posts are ready to provide the general health services. Of these, 88 percent have the basic amenities to provide services, 50 percent have standard precautions for infection prevention, 94 percent have the basic equipment required, and 52.5 percent have essential drugs and 95 % others (RUTF and training).

Table 9.summary of availability of technical and human resources for OTP evaluation at KSW,2018

S.No	General service availability domain	Mean availability of items as percentage
1	Basic amenities	88%
2	Infection prevention	50%
3	Basic equipment	92%
4	Routine medications	52.5%
5	job aids	40%
6	Others (RUTF and OTP training)	90%
Total	: General Service availability score	74.5%

6.1.2. Overall Availability dimension

Availability dimension compared with judgement criteria was good. Details of each indicators and their average is presented in the table below.

Table 10_ availability dimension for the level of implementation of OTP compared with judgement criteria at KSW, 2018

Indicators	Weight given	Expected In number	Observed Value	Result In number	Result in %	Achievement level
❖ Percentage of health posts with availability of outpatient SAM services.	3	20	20	3	100 %	excellent
❖ Percentage of health posts with availability of at least one health extension worker.	2	20	20	2	100 %	excellent
❖ Percentage of health posts with tape water available in their compound.	2	20	11	1.1	55	poor
❖ Percentage of health posts with availability of client latrine with water access.	2	20	20	2	100	excellent
❖ Percentage availability of five basic equipment items (MUAC tape, length board, thermometer, height measure and weight scale) in health posts.	2	220	202	1.84	92%	excellent
❖ Percentage of health posts with availability of adequate store room.	2	20	20	2	100	excellent
❖ Percentage availability of six routine medicines (Amoxicillin syrup, Amoxicillin tablet, Zinc, folic acid, ORS and vitamin A) for two months.	2	120	63	1.05	52.5	poor
❖ Percentage availability of plumpy-Nut for at least two months in stock cards.	2	320	320	2	100	excellent
❖ Percentage availability of at least one method of safe final disposal of infectious wastes.	2	20	0	0	0	poor
❖ Percentage of health posts with availability of safety box.	2	20	15	1.5	75	v.good
❖ Percentage of health posts with available ICCM booklet chart for OTP services.	2	20	20	2	100	excellent
❖ Percentage of health posts with standard OTP registration books.	2	20	20	2	100	excellent
❖ Percentage of health posts with availability of vehicle for emergency transport	3	20	15	2.25	75	v.good
❖ Percentage availability of monthly reporting format for at least two months.	2	40	0	0	0	poor
❖ Percentage of health posts with availability of handwashing facilities	2	20	15	1.5	75	v.good
❖ Overall availability of service	32	1060	881	23.84	74.5	good

N.B. judgement levels

>=90 % = excellent (implemented), 75-89 % =Very good (partially implemented), 60-74 % = good (poorly implemented), < 60 % = poor (not implemented).

6.2. Compliance dimension

In the client-providers interaction observation twenty female HEWs with mean age of 24.45 years and SD of ± 3.12 were participated in the study. Of the 20 HEWs, 13(65%) of them had a working experience of 3-6 years and 7(35%) of them had a working experience of 6-8 years at OTP. The majority, 13(65%) were single and few 7(35%) were married. HEWs were asked whether they receive in service training or not in the last one year. Based on that, the majority 16(80%) said that they had in service training in the last one year and 4(20%) don't get in service training. moreover, percentage of in service training in the last year is described in the following bar graph.



Figure 6 percentage of ICCM in service training evaluation at KSW,2018..

The Proportion of children assessed for general danger signs (able to drink/breastfeed, vomits everything, had convulsions, lethargy) was 31(39.7%) of cases of children assessed. Out of the 80 cases of children correctly assessed for general danger signs, 44(55%) cases of children checked whether child is unable to drink/breastfeed, 36(45.8%) checked for vomits everything, 25(31.6%) ,Children checked whether child has had convulsions and 21(26.6%) of Children checked whether child had lethargy or not.

The proportion of children assessed for all main symptoms was for 55(69%) cases of children assessed. Of the 80 cases of children checked for presence of cough, diarrhea, fever, and malnutrition, 62(78%) of children were correctly checked for cough or fast/difficult breathing, 62(78%) checked for diarrhea, 75(93.75%) checked for fever, 50(63%) checked for edema, 41(51.6%) checked for low MUAC or visible severe wasting and 49(61.6%) checked for palmar pallor.

The proportion of children correctly classified for malnutrition was 43(53.75%) of cases of children diagnosed with malnutrition. The proportion of children correctly classified for any danger signs was 20(30%). However, 76.7%, 80%, 87%, and 91% of children were correctly classified for fever, pneumonia, diarrhea and malnutrition respectively. 69%, 87%, 89.5% & 94% of children were the proportion of children correctly treated for pneumonia, malnutrition, fever and diarrhea respectively.

The Proportion of children correctly treated for malnutrition shows that 80(100%) of children received vitamin A. 69(86%) of cases of children received RUTF, Child needing Amoxicillin received for 43(53.5%), Child needing mebendazole received for 63(78%), Folic acid given according to protocol for 68(85%) and child needing paracetamol received for 68(86%) of cases with mean of 43(53.75%) cases of children correctly treated as guideline out of the total 80 children observed at OTP.

The proportion of children correctly treated and referred for inpatient care, the majority of children 46(70%) don't received first dose of antibiotics, referral slip and transportation assistance at referral, the minority 20(30%) cases of children received first dose of antibiotics, referral slip and transportation assistance. of the 66 cases of children that needs referral only 20 cases of children correctly treated and referred for inpatient care.

On the variable, the proportion of mothers correctly counselled on malnutrition, 60 %(72) of mothers were greeted by health extension workers on their arrival to OTP clinic, 72(90%) of caregivers got explain about the importance of medical treatment to their children. 65(80.8 %) of caregivers got discussion about the key messages to be given at OTP, 47(59.1%) of caregivers repeat instructions explained by the health extension workers and 72(90%) of caregivers got information to link with other services with a mean of 60.8(75.96%) Counselling given for all caretakers.

The major findings of qualitative data indicates that lack of refresher training, supportive supervision, essential drugs and referral slips were the major constraints raised by HEWs that

could affect the quality of assessment, classification, treatment and referral of cases children that in turn will affect HEWs compliance to ICCM guideline. Moreover, the client-provider interaction observation at OTP clinics of the Konso Special Woreda is presented in the following table below.

Table 11. client-provider interaction observation of OTP services at KSW, 2018

S.NO	Correct performance of SAM treatment process	Practice (N=80)			
	List of items	Yes	%	no	%
	General Assessment				
1.	Child correctly assessed for 4 general danger signs (able to drink/breastfeed, vomits everything, had convulsions, lethargy)	31/80	38.75	48/80	62.26
1.1	• Child checked whether child is unable to drink/breastfeed	44/80	54.9	42/80	45
1.2	• Child checked whether child vomits everything	36/80	45.815	43/80	54.14
1.3	• Child checked whether child has had convulsions	25/80	31.654	54/80	68.30
1.4	• Child checked whether child has lethargy	21/80	26.656	58/80	73.304
2.	Child checked for all main symptoms (cough, diarrhea, fever, and malnutrition)	55/80	69.27	24/80	34.01
2.1	○ Child checked for cough or fast/difficult breathing	62/80	78.302	17/80	21.6
2.2	○ Child checked for diarrhea	62/80	78.302	17/80	21.65
2.3	○ Child checked for fever	75/80	93.75	5	6.25
2.4	○ Child checked for malnutrition	46/80	58	34	41
2.5	○ Child checked for edema	50/80	63.308	37/80	46.6
2.6	○ Child checked for low MUAC or visible severe wasting	41/80	51.646	45/80	56.6
2.7	○ Child checked for palmar pallor	49/80	61.642	30/80	38.3
3.	Children with danger signs correctly classified for any danger signs	20/66	30	46/66	70
4.	Children with pneumonia correctly classified for pneumonia	63/80	80	16/80	20
5.	Children with diarrhea correctly classified for diarrhea	62/80	87	12/94	13
6.	Children with fever correctly classified for fever	75/80	93.75	5/80	6.25

7.	Proportion of children correctly classified for malnutrition	43/80	53.75	37/80	46.25
8.	Proportion of children correctly treated for pneumonia	52/75	69	23/75	31
9.	Proportion of children correctly treated for diarrhea	75/80	94	5/80	6
10.	Proportion of children correctly treated for fever	65/75	86.6	10/75	13.3
11.	Proportion of children correctly treated for malnutrition	43/80	53.75	37/80	46.25
12.	o Child needing Plumpy-Nut received	69/80	86	11/80	24
13.	o Child needing Amoxicillin received	43/80	53.5	37/80	46.5
14.	o Child needing Vitamin A received	80/80	100	0	0
15.	o Child needing mebendazole received	63/80	78.75	27/80	21.25
16.	o Folic acid given according to protocol	68/80	85	12/80	15
17.	o ORS given according to protocol	80/80	100	0	0
18.	o Paracetamol given according to protocol	65/75	86	10/76	14
19.	Child needing referral correctly referred	20/66	30	46	70
20.	▪ First dose of antibiotics at referral	20/66	30	46	70
21.	▪ Caretaker of referred child received referral note	20/66	30	46	70
22.	▪ Caretaker of referred child received transportation assistance	20/66	30	46	70
23.	Counselling of caretakers	60.8/80	76	20	14
24.	Did HCP greet mothers/caregivers and are friendly and helpful	48/80	59.976	32	39.84
25.	Did HCP Explain the reason and purpose of medical treatment to mother/caregiver	72/80	90	8	10
26.	Did HCP Discuss all key messages with mothers/caregivers	65/80	80.801	15	19.09
27.	Did HCP Ask mother/caregiver to repeat instructions on how to give medicine and RUTF	47/80	59.143	33	40.67
28.	Did HCP Inform mother/caregiver about linking with other services, programs and initiatives	72/80	89.964	12	9.96

On the variable the Proportion of children whose recorded contents of identification, Out of 104 children registered. 104(100%) were correctly registered for their name and 45(43.3%) were correctly recorded for their respective age with average consistency of recording 74.5(71.5%) as guideline.

On the variable, Proportion of children whose recorded contents of admission anthropometry, out of 104 children records reviewed from OTP registers, date of admission, percentage

weight for height and MUAC was recorded for 81(77.9%),45(43.3%)and76(73.1%) respectively. Moreover, more than half, 67(64.7%) of children were consistently recorded for date of admission, WFH and MUAC as guideline.

Proportion of children whose recorded contents of discharge anthropometry was one of the compliance dimension indicators, according to this study ,Out of 104 records of children in registration book, date of discharge recorded for 73(70.2%),W/H % recorded at discharge for 65(62.5%),MUAC recorded at discharge for 81(77.9%) and outcome status recorded at discharge for 73(70.2%) with a mean of 73(70.2%) for all records at discharge. moreover, the consistency of recording in OTP registration books of the KSW is presented in the following table

Table 12.consistency of recording in OTP registration books of KSW,2018.

No	Questions	Information is clearly recorded?			
		Yes	%	No	%
I	Is the following information recorded in the OTP registration book?				
I	Identification recorded	74.5	71.5	29.5	28.4
1	Name of child recorded	104	100	0	0
2	Age of child recorded	45	43.3	59	56.7
II	Admission anthropometry recorded	67.	64.7	36.6	35.2
3	Date of admission recorded	81	77.9	23	22.1
4	W/H % recorded at admission	45	43.3	59	56.7
5	MUAC recorded at admission	76	73.1	28	26.9
III	Discharge anthropometry recorded	73	70.2	45.5	43.75
6	Date of discharge recorded	73	70.2	31	29.8
7	W/H % recorded at discharge	65	62.5	39	37.5
8	MUAC recorded at discharge	81	77.9	81	77.9
9	Outcome status recorded at discharge	73	70.2	31	29.8

On the variable, percentage of health facilities with at least one supportive supervision report in the last 6 months, the results of this study shows that 16(80%) of health posts had at least one supportive supervision feedback report documented in the last six months from the first date of data collection backwards. Moreover, the number of supportive supervisions conducted by name of health posts of the Konso Special Woreda is presented in the following table below.

Table 13. frequency distribution of number of supportive supervisions conducted an evaluation in Konso Special Woreda, 2018.

S.No.	Characteristics to measure	Is there at least two supportive supervisions documented		
		Yes Or no	number	percent
1	Abaya Health post	yes	1	100
2	Adetta Health post	yes	1	100
3	Arfayde Health post	no	0	0
4	Ashade Health post	no	0	0
5	Beayde Health post	yes	1	100
6	Borkera Health post	yes	1	100
7	Busso Health post	yes	1	100
8	Dekatu Health post	yes	1	100
9	Derayte Health post	yes	1	100
10	Detat Health post	yes	1	100
11	Etiglie Health post	no	0	0
12	Gamolie Health post	yes	1	100
13	Gocha Health post	yes	1	100
14	Karat Health post	no	0	0
15	Kolalta Health post	yes	1	100
16	M/Gezaba Health post	yes	1	100
17	Mechello Health post	yes	1	100
18	Shakona Health post	yes	1	100
19	Shallo Health post	yes	1	100
20	Sorobo Health post	yes	1	100
Total	availability of tracer items	16=yes 4= no	16	80%

Table 14. Documentation of administrative records in health posts of KSW, 2018

No	Questions Is the following recorded information is available in facility document?	Recorded document is available?			
		Yes	%	No	%
1	Is there OTP work plan documented and available in the facility	13(20)	65%	7(20)	35%
2	Is there monthly OTP statistics report documented from sep.11/2017-March 19/2018 in the facilities	11(20)	55%	9(20)	45%
3	Is there financial and costing issues documented and available in the facility	0(20)	0%(20)	20(20)	100%
4	Is there feedback given on supportive supervision reports documented and available in the facility	20(20)	100%	0(20)	0(20)
5	Is there six months OTP performance report available	17(20)	85%	3(20)	15(20)

6.2.1. Overall compliance dimension

The overall compliance dimension compared to judgement criteria was good and the details of the compliance dimension described in the following table.

Table 15.compliance dimension level of implementation of OTP compared with judgement criterai at KSW,2018

Indicators	Weight given	Expected In number	Observed Value	Result In number	Result in%	Achievement level
○ Proportion of children assessed for general danger signs (able to drink/breastfeed, vomits everything, had convulsions, lethargy)	2	80	31	0.77	38.7%	poor
○ Proportion of children assessed for all main symptoms (cough/difficult breathing, diarrhea fever and malnutrition)	2	80	49	1.22	61.5	good
○ Proportion of children correctly classified for general danger signs	2	66	20	0.61	30.5	poor
○ Proportion of children correctly classified for pneumonia	2	75	63	1.68	84	V.good
○ Proportion of children correctly classified for diarrhea	2	75	62	1.65	82.6	V.good
○ Proportion of children correctly classified for fever	2	80	75	1.88	93.75	excellent
○ Proportion of children correctly classified for malnutrition	3	80	43	1.61	53.75	poor
○ Proportion of children correctly treated for pneumonia	2	75	62	1.65	82.6	v.good
○ Proportion of children correctly treated for diarrhea	2	75	62	1.65	82.6	v.good
○ Proportion of children correctly treated for fever	2	80	65	1.62	81.25	v.good
○ Proportion of children correctly treated for malnutrition	2.77	80	43	1.61	53.75	poor
○ Proportion of children correctly treated and referred for inpatient care	2	66	20	0.61	30.5	poor
○ Proportion of mothers correctly counselled on malnutrition	2	120	91	1.51	75.3	v.good
○ Proportion of children whose recorded contents of identification is complete.	2	104	74.5	1.43	71.5	good
○ Proportion of children whose recorded contents of admission anthropometry is complete	2	104	67	1.29	64.5	good
○ Proportion of children whose recorded contents of discharge anthropometry is complete	2	104	73	1.40	70	good
○ percentage of health facilities with at least two supportive supervision report in the last 6 months	2	20	16	1.6	80	v.good
Overall compliance	36	1532	64	24	66.6%	good

N.B. judgement levels

>=90 % = excellent (implemented), 75-89 % =Very good (partially implemented), 60-74 % = good (poorly implemented), < 60 % = poor (not implemented).

6.3. Acceptability dimension

6.3.1. socio-demographic information

The interview was conducted in 411 caregivers in twenty health posts of Konso Special Woreda after they interact OTP service. According to this study, the mean age the caregivers is 35.9 years with a standard deviation of ± 6.85 . From the total respondents 94.6% (389) were females. Educational level of the majority of respondents were read and write 45% (185) and 27% (112) were illiterates. Moreover the socio-demographic characteristics is presented in the table below.

Table 16. socio-demographic information of caregivers during OTP service at Konso Special Woreda, 2018.

Variables	characteristics	Frequency(n)	Percent (%)
Age N= 411	15-24	12	2.916
	25-34	76	18.468
	35-44	254	61.722
	45-49	69	16.767
Sex	Female	389	94.527
	Male	22	5.346
occupation	government employee	3	0.7
	merchant	35	8.5
	Farmer	235	57.2
	house wife	138	33.6
marital status	Married	344	83.7
	Single	29	7.1
	Divorced	22	5.4
	Widowed	16	3.9
educational grade of client	no education	112	27.216
	read and write	185	44.955
	Primary	52	12.636
	Secondary	48	11.664
	diploma and above	14	3.402
House hold income	<1000	76	18.468
	1001-5000	147	35.721
	5001-10000	98	23.814
	10001-15000	47	11.421
	>=15001	43	10.449
Religion	Orthodox	141	34.263
	Protestant	141	34.263
	Catholic	69	16.767
	Muslim	49	11.907
	Others	11	2.673
Ethnicity	Konso	217	52.7
	derashe	135	32.805
	Oromo	51	12.393
	Amara	8	1.944

6.3.2. Health system related issues

From the findings of the survey conducted in twenty health posts, 95%(392) participants were located inside the catchment area of the health post attended and the minority 4%(19) came from outside of the catchment area with 51.7%(213) of them travelled less than 30 minutes and 48%(198) traveled more than 30 minutes to reach the health post to get OTP service. Moreover, the health system related information is presented in the table below.

Table 17.health system related information of child caregivers during OTP service at Konso Special Woreda, 2018.

Variables	Characteristics	Frequency(n)	Percent (%)
Location of HP	inside residence	392	95.256
	outside residence	19	4.617
Distance travelled minutes	less than 30 min	213	51.759
	greater than 30 min	198	48.114
transport	Car	19	4.617
	on foot	392	95.256
difficulty to attend OTP wkly	yes	190	46.17
	No	221	53.703
working hour was convenient	yes	187	45.5
	No	224	54.5
waiting time at waiting room to get services	lees 15 min	356	86.6
	greater 15 min	55	13.4

6.3.3. Caregivers satisfaction on service provided

In order to measure delivery of OTP service in caregivers perspective we used fifteen satisfaction items with five likert scales using score one as simple mean of rating .The reliability of each item determined individually by scale if item is deleted, accordingly, the test result of all items had a coefficient more than 0.4, and collectively the items reliability were tested and had Cronbach alpha value of 0.76.It is within the range of recommended alpha value of greater than 0.7.

Most of caregivers were satisfied on the variable waiting time to get consultation. Accordingly, 89(21.7%) were very satisfied, 208(50.6%) were satisfied,20(4.9%) were

neutral, 60(14.6%) were dissatisfied and 34(8.3%) were very dissatisfied with mean of 2.37 and standard deviation of ± 1.208 .

The level of caregivers satisfaction with the length of consultation 72(17.5%) were very satisfied 156(38%) were satisfied, 17(4.1%) were neutral, 99(24.1%), were dissatisfied and 67(16.3%) were very dissatisfied with mean of 2.84 and SD of ± 1.397 .

On the variable with the convenience to working hour of OTP most of them were very dissatisfied 204(49.6%), 100 (24.3%) were very dissatisfied, 6.83(6.6%) were very satisfied and 52(12.7%) were satisfied with mean of 3.78 and SD of ± 1.096 .

On the variable with the convenience to working day of OTP most of participants were dissatisfied 241(58.6%), 105(25.5%) were very dissatisfied, 19(4.6%) were very satisfied, 35 (8.5%) were satisfied and 11(2.7%) were neutral with mean of 3.92 and SD of ± 1.017 .

The level of caregivers satisfaction on the availability of OTP services when needed 180(43.8%) were very satisfied, 141(34.3%) were satisfied, 50(12.2%) were dissatisfied, 40(9.7%) were very dissatisfied with mean of 2.1 and SD of ± 1.34 .

The level of caregivers satisfaction on availability of HCPs present when needed and appropriateness of therapy prescribed by the HEW 180(43.8%) were very satisfied, 141(34.3%) were satisfied, 50 (12.2%) were dissatisfied, 40(9.7%) were very dissatisfied with mean of 2.1 and SD of ± 1.34 .

On the variable with the cleanliness of equipment used by the health workers 82(20%) were very satisfied, 79(19.2%) were satisfied 32(7.8%) were neutral, 71(17.3%) were dissatisfied and the majority 147(35.8%) were very dissatisfied with mean of 3.3 and SD of ± 1.585 .

The level of satisfaction with the availability of privacy room 225(54.7%) were strongly satisfied, 83(20.2%) were satisfied and 103(25.1%) were very dissatisfied with mean of 2.2 and SD of ± 1.664 .

The level of satisfaction with the personal manner (courtesy, respect, sensitivity, friendliness) of the HCP the majority 126(30.7) were satisfied, 90(21.9%) were very satisfied, 98(23.8%) were neutral, 82(20%) were dissatisfied and 15(3.6%) were very dissatisfied with mean of 2.6 and SD of ± 1.14 .

The level of caregivers satisfaction with clearness and completeness of explanation given to you by the HEW the majority 241(58.6%) were dissatisfied, 105(25.5%) were very dissatisfied, 19(4.6%) were very satisfied, 35(8.5%) were satisfied and 11(2.7%) were neutral with mean of 3.92 and SD of ± 1.017 .

On the variable with the competence of the health worker you attended most of the caregivers were 187(45.55%) were very satisfied, 114(27.7%) were satisfied, 56(13.6%) were dissatisfied and 54(13.1%) were very dissatisfied with mean of 2.21 and SD of ± 1.464 .

The level of caregivers satisfaction with the overall quality of OTP services, 106(25.8%) were very satisfied, 203(49.4%) satisfied, 68(16.5%) neutral, 16(3.9%) dissatisfied, 18(4.4%), very dissatisfied with mean of 2.12 and SD of ± 0.981 .

The average of all satisfaction measuring items shows that 26.5% of respondents were very satisfied, 28.51% were satisfied, 5.75% neutral, 23.4% were dissatisfied and 15.74% were very dissatisfied with mean of 2.7.

Summary of caregiver's satisfaction on OTP service provided

Table 18. level of caregivers satisfaction on each satisfaction measuring items of OTP service provided at Konso Special Woreda, 2018.

Variables	Strongly Satisfied(1)		Satisfied(2)		Neutral(3)		Dissatisfied(4)		Strongly dissatisfied(5)		mean	SD
	No	%	No	%	No	%	No	%	No	%		
Q1_waiting time	89	21.7	208	50.6	20	4.9	60	14.6	34	8.3	2.37	1.208
Q2_the length of consultation	72	17.5	156	38	17	4.1	99	24.1	67	16.3	2.84	1.397
Q3_convenience to working hour	28	6.8	27	6.6	52	12.7	204	49.6	100	24.3	3.78	1.096
Q4_convenience to working day	19	4.6	35	8.5	11	2.7	241	58.6	105	25.5	3.92	1.017
Q5_availability of OTP services	180	43.8	141	34.3	0	0	50	12.2	40	9.7	2.1	1.34
Q6_availability of HCPs present	180	43.8	141	34.3	0	0	50	12.2	40	9.7	2.1	1.34
Q7_appropriateness of therapy	180	43.8	141	34.3	0	0	50	12.2	40	9.7	2.1	1.34
Q8_cleanliness of equipment	82	20	79	19.2	32	7.8	71	17.3	147	35.8	3.3	1.585
Q9_cleanness of	72	17.5	156	38	17	4.1	99	24.1	67	16.3	2.84	1.397

the facility												
Q10_privacy	225	54.7	83	20.2	0	0	0	0	103	25.1	2.2	1.664
Q11_personal manner	90	21.9	98	23.8	126	30.7	82	20	15	3.6	2.6	1.14
Q12_clearness and completeness of explanation	19	4.6	35	8.5	11	2.7	241	58.6	105	25.5	3.92	1.017
Q13_completeness of the information	109	26.5	141	34.3	0	0	125	30.4	36	8.8	2.61	1.381
Q14_competence of the HEW	187	45.5	114	27.7	0	0	56	13.6	54	13.1	2.21	1.464
Q15_overall quality of OTP services	106	25.8	203	49.4	68	16.5	16	3.9	18	4.4	2.12	0.981
Average score	109.	26.56	117.2	28.51	23.6	5.75	96.26	23.4	64.7	15.74	2.7	±1.29
Mean score total	82										2.7	±1.29

6.3.4. Forming satisfaction sub measurement

6.3.4.1. Factor analysis

By using principal factor analysis method, the adequacy of sample size were determined using Kaiser-Meyer-Olkin (KMO) test. KMO value closer to one were considered useful for factor analysis and less than 0.5 will be appropriate for analysis due to inadequate sample size(121,122).

The Kaiser–Meyer–Olkin measure verified the sampling adequacy for the analysis, KMO value was 0.97 and all variables had Eigen value greater than 0.80.

The factor analysis was conducted as the part of data analysis to prepare the data for further statistical analysis.

6.3.4.2. Factor extraction

The fifteen items were subjected to exploratory factor analysis with principal components extraction method to identify underlying factors and to reduce the number of items

For factor extraction, Kaiser-Guttman rule, accordingly three factors/ components with eigen value > 1 was retained for further analysis after Varimax rotation method to explain predictors of client satisfaction and the relationship between variables were determined using factor loading where, factor loading greater than 0.4 were taken as variables related to factor and less than 0.3 were considered no association and it were discarded and make its unique factor(121,122).

In this study, all variables had greater than 0.4 factor loading and none of them had formed a unique factor. when we rotate the items by Varimax procedure, factor/component one explains items, Q7, Q5, Q6, Q14 and Q10 with 43.5% of variance explained .factor/component two explains items, Q1, Q3 and Q13 with 26.3% of variance explained and factor/component three explains items, Q8 and Q9 with 15% of variance explained.

Consequently, ten meaningful factors emerged and they were named as the appropriateness of therapy prescribed, the availability of OTP services when needed, the availability of HCPs present when needed, the competence of the health worker, the privacy of OTP rooms, the convenience to working hour of OTP, the completeness of the information given waiting time to get consultation, the cleanliness of equipment and the cleanness of the facility. Moreover, the rotated component matrix is presented in the table below.

Table 19.presentation of rotated factor loading of each satisfaction item on OTP service provided at KSW, 2018.

Rotated component matrix^a		Component/factor		
S.No	List of items	1	2	3
1.	Q7_How satisfied are you with the appropriateness of therapy prescribed by the HEW.	0.976		
2.	Q5_How satisfied are you with the availability of OTP services when needed	0.976		
3.	Q6_How satisfied are you with the availability of HCPs present when needed	0.976		
4.	Q14_How satisfied are you with the competence of the health worker you attended	0.848		
5.	Q10_How satisfied are you with the privacy	0.801		
6.	Q1_How satisfied are you with the waiting time to get consultation		- 0.967	
7.	Q3_How satisfied are you with the convenience to working hour of OTP		0.959	
8.	Q13_How satisfied are you with the completeness of the information given to you about your problem)?		0.823	
9.	Q9_How satisfied are you with the cleanness of the facility			0.879
10.	Q8_How satisfied are you with the cleanliness of equipment used by the health workers			- 0.849
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 3 iterations.				

The cumulative percentage of variance explained by the three factors was 84.7% %. During factor analysis, double loaded of > 0.4 eigen value and weakly related items (factor loading <0.40) to the emerged factor components were dropped from further analysis, and hence, the number of items was reduced to ten.

Each factor is represented by one of the items with highest eigen value. Accordingly component/factor one is represented by the appropriateness of therapy prescribed, the second component/factor two is represented by waiting time to get consultation and the cleanness of the facility.

Table 20. representation of total variance explained using cumulative percentage by the three component factors in KSW,2018.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.780	47.805	47.805	4.780	47.805	47.805	4.346	43.458	43.458
2	2.191	21.915	69.720	2.191	21.915	69.720	2.625	26.252	69.709
3	1.504	15.043	84.763	1.504	15.043	84.763	1.505	15.053	84.763
4	.696	6.958	91.721						
5	.412	4.125	95.846						
6	.235	2.348	98.194						
7	.141	1.410	99.604						
8	.040	.396	100.000						
9	4.436E-017	4.436E-016	100.000						
10	1.529E-017	1.529E-016	100.000						

Extraction Method: Principal Component Analysis.

6.3.5. Transformation of ordinal scale to nominal scale

Initially, respondents were asked fifteen items. Each item was scored on a five point Likert Scale ranging from 5 (highest score) to 1 (lowest score). By transformation of ordinal scale to nominal scale, the three components/ factors that were extracted by factor analysis were dichotomized in to satisfied and dissatisfied. Hence, for the convenience of analysis, recoding of scales was done to dichotomise the results. Clients who marked score 1 and 2 were considered as ‘satisfied’ and recoded as 1., while scores marked from 3-5 as ‘not satisfied’ and recoded as 0 by using cut of point calculated using demarcation threshold formula (total highest score- total lowest score)/2 + total lowest score. However, not satisfied should not necessarily mean dissatisfied, since the neutral categories included in this group. For each dependent variable bivariate and multivariate analysis were done to see relations with independent variables. The distribution was presented in the following table.

Table 21.level of caregivers satisfaction on each satisfaction measuring items of OTP provided at KSW,2018.

S.No	Items	Not satisfied	undecided	satisfied	% sum
1.	satisfied with the appropriateness of therapy prescribed	90(21.9%)	0	321(78%)	411(100%)
2.	satisfied with the waiting time to get consultation	94(22.9%)	20(4.9%)	297(71.3%)	411(100%)
3.	How satisfied with the cleanness of the facility	166(40.4%)	17(4.1%)	228(55.5%)	411(100%)

6.3.6. Factors that may affect caregiver's satisfaction

To identify factors which significantly predicted satisfactions with overall OTP service, the association between dependent and independent variables were determined using bivariate and multivariate logistic regression with 95 % confidence interval. All variables which were significant on bivariate analysis ($p < 0.25$) were fitted into multiple logistic regression model to control the potential confounders using adjusted odds ratio (AOR). A 95% confidence interval and level of significance less than 0.05 were used to check for association and Beta coefficient was interpreted for statistically significant variables. Finally, the results were judged based on judgement matrix of analysis with the dimensions formulated and indicators.

The factors that had association in bivariate (COR) analysis were eligible for multivariate (AOR) analysis. Accordingly, religion, ethnicity, occupation, marital status, educational grade, house hold income and distance travelled in minutes and waiting time to get service had association in bivariate analysis with ($P < =0.25$).The effect of factors on caregivers satisfaction on overall quality of OTP service provided is presented in the following table.

6.3.6.1. Bivariate analysis

Table 22. The effect of factors on caregivers satisfaction on overall quality of OTP service provided at Konso Special Woreda, 2018

Variables		Satisfied		Not satisfied		P-value	CO R	95% CI	
Name	characteristics	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)			COR	
Age N= 411	<=24.5	241	79.8	61	20	-----	-----	---	---
	>=25	82	75	27	24.8	0.32	1.30	0.77	2.183
Sex	Female	301	73.143	88	21.384	0.998	0	0	
	Male	22	5.346	0	0	.998	.000	.000	
occupati on	government employee	3	0.729	0	0	0.997	0	0	.
	Merchant	19	4.617	16	3.888	001**	0.06	0.02	0.212
	Farmer	185	44.955	50	12.15	001**	8.3	4.90	14.043
	house wife	116	28.188	22	5.346	0.966	1.01	0.62	1.64
marital status	Married	271	78.8	73	21	.003*	4.77	1.71	13.24
	Not married	52	77.6	15	22	.019*	4.92	1.29	18.73

						*			3
educational grade of client	no education	95	23.08	17	4.131	0.004**	5.58	1.73	17.9
	read and write	151	36.69	34	8.262	0.009**	4.44	1.46	13.5
	primary	33	8.019	19	4.617	0.363	1.73	0.52	5.70
	secondary	37	8.991	11	2.67	0.05**	3.36	0.96	11.6
	diploma and above	7	1.701	7	1.701	0.9	0	0	.
Household income	<=2810.5	280	88	38	11.9	0.001**	0.11	0.06	0.198
	>=2811	43	46	50	54	0.535	0.85	0.51	1.406
religion	orthodox	116	28.18	25	6.075	.142	.640	.352	1.162
	protestant	112	27.21	29	7.047	0.997	0	0	.
	catholic	52	12.63	17	4.131	0.269	0.60	0.24	1.481
	Muslim	34	8.262	15	3.645	0.99	0	0	
	others	9	2.187	2	0.486	-----	-----	-----	-----
ethnicity	konso	178	43.25	29	7.047	.003* *	2.08	1.29	3.365
	derashe	107	26.00	28	6.804	.030**	1.74	1.05	2.894
	oromo	35	8.50	16	3.888	0.932	1.05	0.33	3.277
	Amara	3	0.729	5	1.215	0.999	0	0	.
Location of HP	inside residence	304	73.8	88	21.38	0.998	0	0	
	outside residence	19	4.617	0	0	-----	-----	-----	-----
Distance travelled minutes	less than 30 min	179	43.497	34	8.262	0.006**	1.97	1.21	3.197
	greater than 30 min	144	34.992	54	13.122	-----	-----	-----	-----
transport	car	19	4.617	0	0	0.998	4676	0	-----
	On foot	304	73.872	88	21.384	-----	-----	-----	-----
difficulty to attend OTP weekly	yes	147	35.721	43	10.449	0.57	1.14	0.71	1.834
	No	176	42.768	45	10.935	1	0.57	0.87	0.545
working hour was convenient	Yes	144	34.992	43	10.449	0.475	0.84	0.53	1.35
	No	179	43.497	45	10.935	-----	-----	-----	-----
waiting time at	<15min	275	66.825	71	17.253	0.097	0.49	0.21	1.14

waiting room to get services	>15min	48	11.664	7	1.701	-----	-----	-----	-----
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6.3.6.2. Multivariate analysis

Ethnicity (Konso) has strong association ($p = .0001$) with caregivers satisfaction overall SAM service provided, out of the total respondents, 178(43%) were satisfied and 29(7%) dissatisfied. Being Konso in ethnicity increased the odds of patients satisfaction with the overall SAM service by a factor of 3.44 times than Derashe (AOR= 3.44, 95% CI=1.77-6.6).

House hold income has strong association ($p =0.002$) with caregivers satisfaction overall SAM service provided, out of the total respondents, 74(17.9) were satisfied and 24(5.83%) dissatisfied. a one unit increase in household income (<1000) increased the odds of patients satisfaction with the overall SAM service by a factor of 4 times. (AOR= 4.1, 95% CI=2.81-10.051).

Read and write has strong association ($p = .013$) with caregivers satisfaction overall SAM service provided, out of the total respondents, 151(36%) were satisfied and 34(8.3%) were dissatisfied with the OTP service they received. An increment in educational status (read and write) increased the odds of patients satisfaction with the overall SAM service by a factor of 2.6 times (AOR=2.6, 95% CI= 1.22- 5.5).

Primary education has strong association ($p =0.003$) with caregivers satisfaction overall SAM service provided, out of the total respondents, 33(8%) were satisfied and 19(4.6%) were dissatisfied with the OTP service they received. An increment in educational status (primary) decreases the level of caregivers satisfaction by 73.7% with (AOR=.263, 95% CI=.109-.638)

Distance travelled in minutes has a strong association with caregivers satisfaction ($p= 0.001$) on overall quality of OTP service provided. out of the total respondents, 179(43.5%) were satisfied and 34(8.26%) were dissatisfied . the level of caregivers satisfaction increases when the distance travelled in minutes is less than 30 min by a factor of 2.73 times than those travelled greater than 30 minutes to reach the health post(AOR=2.73, 95% CI= 2.15-4.837).

Multivariate analysis shows that age, occupation, sex, religion, location of health post, method of transport, working hour of OTP and waiting time had no association with caregiver's satisfaction on overall quality of OTP service provided. Moreover, ethnicity, household income, educational status and distance travelled in minutes were the predictors of client satisfaction on overall SAM service provided.

Table 23. the effect of factors on caregiver's satisfaction on overall quality of OTP service at KSW, 2018.

Variables		Satisfied		Not satisfied		P-value	AO R	95% CI	
Name	characteristics	Frequency (n)	Percent (%)	Frequency(n)	Percent (%)			AOR	AOR
Age N= 411	15-24	12	2.916	0	0	1	4.31	0	1
	25-34	58	14.094	18	4.374	0.997	0	0	0.997
	35-44	200	48.6	54	13.122	-----	-----	----	-----

								-	
	45-49	53	12.879	16	3.888	-----	-----	----	-----
Sex	Female	301	73.143	88	21.384	0.999	3379	0	.
	Male	22	5.346	0	0	-----	-----	----	-----
occupati on	governm ent employee	3	0.729	0	0	.999	176 075 81.	.00 0	.
	Merchant	19	4.617	16	3.888	.999	.00 1	.00 0	.
	Farmer	185	44.955	50	12.15	.999	.00 4	.00 0	.
	house wife	116	28.188	22	5.346	0.966	1.0 1	0.6 2	1.64
marital status	Married	271	65.853	73	17.739	0.37	0.3 5	0.0 3	3.471
	Single	23	5.589	6	1.458	0.922	0.9 5	0.3 7	2.422
	Divorced	22	5.346	0	0	0.999	552 972 8.	0	.
	Widowed	7	1.701	9	2.187	0.996	237 480 71. 3	0	.
educatio nal grade of client	no education	95	23.085	17	4.131	.122	1.8 7	.84 4	4.178
	read and write	151	36.693	34	8.262	.013* *	2.5 9	1.2 2	5.499
	primary	33	8.019	19	4.617	.003* *	.26 3	.10 9	.638
	secondar y	37	8.991	11	2.673	0.995	6.2 208 9E+ 23	0	.
	diploma and above	7	1.701	7	1.701	-----	-----	----	----
House hold income	less 1000	63	15.309	13	3.159	.002* *	4.1 0	2.8 1	10.05 1
	1001- 5000	118	28.674	29	7.047	.464	1.2 9	.64 8	2.585
	5001- 10000	74	17.982	24	5.832	.209	1.5 8	.77 2	3.256
	10001- 15000	36	8.748	11	2.673	.063	.38 6	.14 2	1.053
	>=15000	32	7.776	11	2.673	-----	-----	----	----

religion	orthodox	116	28.188	25	6.075	0.999	2.0 571 8E+ 12	0	0.999
	protestant	112	27.216	29	7.047	1	245 167 2.	0	1
	catholic	52	12.636	17	4.131	1	0.0 1	0	1
	muslim	34	8.262	15	3.645	-----	----- --	----	-----
	others	9	2.187	2	0.486	-----	----- --	----	-----
ethnicity	konso	178	43.254	29	7.047	.0001 **	3.4 4	1.7 7	6.678
	derashe	107	26.001	28	6.804	1	2.0 7	0	.
	oromo	35	8.505	16	3.888	0.999	0	0	.
	Amara	3	0.729	5	1.215	-----	----- --	----	-----
Location of HP	inside residence	304	73.872	88	21.384	0.999	288 600 1.	0	.
	outside residence	19	4.617	0	0	-----	-----	----	-----
Distance travelled minutes	less than 30 min	179	43.497	34	8.262	.001* *	2.7 3	2.1 5	4.837
	greater than 30 min	144	34.992	54	13.122	1			
transport	Car	19	4.617	0	0	0.998	467 6	0	-----
	On foot	304	73.872	88	21.384	-----	-----	----	-----
difficult y to attend OTP weekly	Yes	147	35.721	43	10.449	0.23	0.5 7	0.2 3	1.422
	No	176	42.768	45	10.935	-----	-----	----	-----
working hour was convenient	Yes	144	34.992	43	10.449	0.708	0.8 3	0.3 3	2.112
	No	179	43.497	45	10.935	-----	-----	----	-----
waiting time at waiting room to get services	<15min	275	66.825	71	17.253	0.998	457 869 185	0	.
	>15min	48	11.664	7	1.701	-----	-----	----	-----

NB. ** = variables significant at $p \leq 0.05$ at multivariate analysis

6.3.7. Acceptability dimension

Acceptability of caregivers satisfaction compared with judgement criteria was was judged as good. Measure of each indicators and the average is presented in the following table below.

Table 24. acceptability dimension level of implementation of OTP compared with judgement criteria at KSW, 2018.

Indicators	N = 411					
	Weight given	Expected satisfaction	Observed Value	Result In number	Result in %	Achievement level
Q1_How satisfied are you with the waiting time to get consultation	3	323	297	2.75	91.9	excellent
Q2_How satisfied are you with the length of consultation	2	323	228	1.41	70.58	good
Q3_How satisfied are you with the convenience to working hour of OTP	2	323	55	0.34	17.02	poor
Q4_How satisfied are you with the convenience to working day of OTP	2	323	54	0.33	16.71	poor
Q5_How satisfied are you with the availability of OTP services when needed	2	323	321	1.98	99.38	excellent
Q6_How satisfied are you with the availability of HCPs present when needed	2.3	323	321	2.28	99.38	excellent
Q7_How satisfied are you with the appropriateness of therapy prescribed by the HEW.	2.7	323	321	2.68	99.38	excellent
Q8_How satisfied are you with the cleanliness of equipment used by the health workers	2.	323	161	0.99	49.84	poor
Q9_How satisfied are you with cleanness of the facility	2	323	228	1.41	70.58	good
Q10_How satisfied are you with the privacy	2	323	308	1.90	95.35	excellent
Q11_How satisfied are you with the personal manner (courtesy, respect, sensitivity, friendliness) of the HCP	2	323	188	1.16	58.2	poor
Q12_How satisfied are you with clearness and completeness of explanation given to you by the HEW	2	323	54	0.33	16.72	poor
Q13_How satisfied are you with the completeness of the information given to you about Dx and Rx	2	323	250	1.54	77.39	V.good
Q14_How satisfied are you with the competence of the health worker you attended	2	323	301	1.86	93.18	excellent
Q15_How satisfied are you with the overall quality of OTP services	2	323	309	1.91	95.6	excellent
Overall acceptability dimension	32	323	226	22.87	71.5	good

N.B. judgement levels

$\geq 90\%$ = excellent (implemented), 75-89 % =Very good (partially implemented), 60-74 % = good (poorly implemented), $< 60\%$ = poor (not implemented).

6.3.8. Summary of Overall dimensions

Table 25. overall quality of OTP service, evaluation at Konso Special Woreda, 2018.

Dimensions	Indicator number	Value given	Value achieved	Percentage achieved	Judgment parameter	Overall implementation
Availability	15	32%	23.84	74.5%	good	Poorly implemented 60-74%
Compliance	17	36%	24	66.6%	good	
Acceptability	15	32%	22.87	71.5%	good	
total	47	100	70.8	70.8%	good	

N.B. Judgment levels

>=90 % = excellent (implemented), 75-89 % =Very good (partially implemented), 60-74 % = good (poorly implemented), < 60 % = poor (not implemented).

Table 26. Overall judgement parameters of OTP service at KSW, 2018

Judgment level	Parameter	definition
Implemented Excellent implementation	≥ 90%.	Current achievement on OTP service is in line with pre-setted objectives and need to be continued
Very good or Partially implemented	75-89%.	Major areas in the implementation needs to be revised and modified
Good(poorly implemented)	60-74 %	Major and minor areas of the program implementation needs urgent revision and improvement
Poor, not implemented	<60%	The program plan, strategies and implementation needs very urgent revision and improvement

6.4. Limitation of the evaluation

- Client exit interviews were conducted in the health facilities, therefore, it is possible that informants may have been hesitant to criticize service providers and this may have contributed to the high satisfaction recorded
- It is possible that Hawthorne effect influenced health extensions practice during client-provider interaction where HEWs perform best when they are under observation by data collectors than the unobserved ones. moreover, keeping the HEWs informed for the next visit may bias results positively
- Some information about the HEWs was collected through self -report of themselves that may be biased, HEWs were asked about their level of training and years of experience that HEWs may report the information based on what is expected than what actually is.
- Finally, the study area is high burden malnutrition hotspot area in SNNPR that may overestimate results.

Chapter 7-Discussion

7.1. Availability dimension

The availability of necessary routine medicines was judged poor. Accordingly, 25% of health posts had ORS, 30% amoxicillin tablets, 75% had amoxicillin syrup and none of the health posts had zinc sulfate with mean availability of 32.5% in the domain. However, a study conducted in Southern region of Ethiopia showed that 38% of health posts had ORS, 56% had amoxicillin tablet, 44% of health posts had amoxicillin syrup and 6% of the health posts had Zinc sulphate with mean availability of 36% in the domain(3). The mean availability of this study is almost similar to the study conducted in southern Ethiopia. But, Community therapeutic care manual of valid international recommends that all essential routine medications be available in health facilities for effective implementation of OTP services(118).

The availability of improved water source in health posts were judged poor, based on this study, improved water source was not available for 9(45%) of the health posts. The findings of this study is comparable to Baseline Evaluation of Maternal and Newborn Health Care Services in Ethiopia showed that 44% of health posts had regular water supply(123). However, a SARA report in Ethiopia indicates that only 17 percent health posts had an improved water source in their compound. The difference could be due to small sample size of the study area.

The proportion of health facilities with availability of Safe final disposal of wastes was judged poor. According to this study, none of the twenty health posts had incinerator or open burning in protected area or another method of waste disposal in their health post. The findings of this study was lower than a study conducted on biomedical waste disposal systems in Ethiopia that, The use of safe medical waste disposal methods in health posts were 52.6% (124). moreover, the same article reported that the majority of health facilities(58%) used unsafe waste treatment methods, including open burning and dumping in unsanitary ways. The difference could be due to large geographic coverage of health posts in the study. But, it is recommended that each health post should have a way to dispose waste such as incinerator or open burning in a protected area in order to prevent infection prevention.

The total number of HPs with availability of reporting format was judged as poor by judgement value. The findings of this study showed that none of the health posts had reporting format in their health posts. However, baseline evaluation of maternal and newborn

health care services in 25 Selected Woredas of Ethiopia pointed out that , 69.1% of health facilities had HMIS record filing system (in the form of protocols or formats(123).The difference could be due to exclusive inclusion of health center and hospitals in the sample in the evaluation of maternal and newborn health care services.

7.2. Compliance dimension

Proportion of children assessed for general danger signs was judged as poor by judgement matrix. The findings of this study showed that, only 31.5(39.37%) of cases of children were assessed for general danger signs. however, a study in west Hararghe(64) indicates 45%, which is comparable to the study area. But, a study in Jimma zone shows 74%.The difference may be due to the double effect of large sample size(150 HPs) and interventional comparative study design were used in Jimma zone of Oromia region(64).

Proportion of children assessed for all main symptoms was judged as good by judgement matrix. The findings of this study showed that, 55(69%) of children were correctly assessed for all main symptoms. The findings of this study was comparable to a study in west Hararghe which was 62%(64).But, a study in Jimma zone was 93% which is higher than the study area, this may be due to double effect of sample size and study designs used in Jimma zone of Oromia region(64).

The proportion of children correctly classified for malnutrition was judged as poor by using judgement matrix. The findings of this study shows that 43(53.75%) of children were correctly classified for malnutrition. However, 53% of children with malnutrition were correctly classified for malnutrition in Jimma zone (64).The findings of this study is comparable to a study conducted in Jimma zone.

The Proportion of children correctly treated for malnutrition was judged as poor by judgement matrix. The findings of this study indicates that, all children with malnutrition received vitamin A 80(100),and ORS correctly for 80(100 %) of cases diagnosed.69(86%) of cases of children received RUTF, Child needing Amoxicillin received for 43(53.5%), Child needing mebendazole received for 63(78%), Folic acid given according to protocol for 68(85%) and child needing paracetamol received for 65(86%) of cases with mean of 66(83.5%) cases of children correctly treated as guideline. Another study conducted by ESPA plus in Ethiopia showed that,83% of vitamin A,90% ORS,66% mebendazole and 23% amoxicillin provided to treat malnourished children with mean of 65% received all

medications (125). The findings of this study is comparable to the study area but higher than study conducted in Pakistan showed that, 12 (66.7%) of children given antibiotics, 4 (80 %) were given folic acid, 72% (36) of children were given RUTF according to protocol (126). The findings of this study are more higher compared to the study in Pakistan. The difference may be due to small sample size included in the study conducted in Pakistan.

7.3. Acceptability dimension

The overall mean of client satisfaction on OTP service ranges between very satisfied and satisfied, i.e. between 1 and 2 likert scales. The majority of clients (55.06%) were satisfied with the overall level of OTP service they received. The findings of this study is in line with a study conducted in Sidama district of Ethiopia and Bangladesh that 58% and 52% respectively (68,69).

On the waiting time to get consultation, this study shows that 72.3% of participants were satisfied with the waiting time to get consultation. The findings of this study is almost comparable to a study conducted in Sidama district that 65% of participants reported as satisfied (68). But, 59% of participants reported West Amhara region of Ethiopia, which is lower to the study area. The difference may be due to the subjective nature of the subject matter (101).

On the variable, politeness of HEWs when providing service, this study indicates that, 45.7 % of participants were satisfied with the politeness of HEWs they faced at OTP. But, a study in Sidama district indicates that 87%. The findings of this study was lower compared to a study in Sidama district, this may be due to the subjective nature of the subject matter (68).

On the variable, clearness and completeness of explanation by the HEW was judged as poor, this study shows that only 13% clients were satisfied with the explanation given by the HEW. However, it was 72% in a study conducted in Sidama district of Ethiopia. The difference may be to the subjective nature of the satisfaction status (68).

7.4. Predictors of client satisfaction

From the multivariate analysis, educational status, ethnicity, house hold income and distance travelled in minutes were the predictors of patient satisfaction.

This study findings shows that, a one unit increment in household income (<1000) increased the odds of patients satisfaction with the overall OTP service by a factor of 4 times. (AOR=

4.1, 95% CI=2.81-10.051).The possible reason may be due the fact that people with high income are able to pay for health service.

This study findings shows that, an increment in educational status (primary) decreases the level of caregivers satisfaction by 73.7% with (AOR=.263, 95% CI=.109-.638).The possible reason may be due to the fact that, the more we are educated the more we are aware of the quality of service to be provided that their expectation may not be fulfilled.

This study findings shows that, Being Konso in ethnicity increased the odds of patients satisfaction with the overall SAM service by a factor of 3.44 times than Derashe (AOR= 3.44, 95% CI=1.77-6.6).The possible reason may be due to the fact that HEWs provided service with the language they understand(“*Konsogna*”).

This study findings shows that ,An increment in educational status (read and write) increased the odds of patients satisfaction with the overall SAM service by a factor of 2.6 times than no education (AOR=2.6, 95% CI= 1.22- 5.5).The possible reason may be due to their awareness of about health services provided.

Finally, the findings of this study shows that, the level of caregivers satisfaction increases when the distance travelled in minutes is less than 30 min by a factor of 2.73 times than those travelled greater than 30 minutes to reach the health post(AOR=2.73, 95% CI= 2.15- 4.837).The possible reason may be to save a time for another business.

Chapter-8: conclusion and recommendation

8.1. Conclusions

The overall implementation of OTP service determined based on the achievement of the three dimensions, availability of resources to provide OTP service, compliance of providers with national ICCM guideline and acceptability of service in caregivers perspective measured in terms of satisfaction.

8.1.1. Availability dimension

The achievement level of availability dimension was 74.5% which was judged to be good and requiring some improvement. Even if the achievement was good, there were shortage of some resources. In all the twenty health posts of the woreda assessed, none of the health posts had reporting formats, safe final disposal of wastes such as incinerator and Zinc sulphate drug for children with diarrhoea., most (70%) of health posts didn't have Amoxicillin tables, three-fourth of health posts had not had ORS, a significant number of HPs (45%) had no tape water, a quarter of HPs (25%) had no handwashing facilities, safety box and amoxicillin syrup. Moreover, small number of HPs (15%) had no emergency transport vehicle. However, most the minimum required resources such as, store room, guideline, client latrine, registration books, plumpyNut, measuring tape, weight scale and daily SAM services were available as guideline.

8.1.2. Compliance dimension

The achievement level of compliance dimension was 66.6 % which was judged to be good and requiring some improvement. Even if the achievement was good, there were some failures during implementation according to ICCM guidelines. i.e., more than half (62.5 %) of children not checked for general danger signs, only 20 (30%) were classified for general danger signs and 44(31%) was not assessed correctly for all main symptoms as guideline recommendations. moreover, 37(46%) of children not correctly classified for malnutrition and only 43(53.75%) correctly treated for malnutrition. Majority (80) of HPs had at least two supportive supervisions documented. Furthermore, out of the 120 caregivers, 75(63 %) of them received counselling about their condition. When we came across the issues of consistency of recording on registration books, 66.7% of children's age was not registered on registration books.

8.1.3. Acceptability dimension

The achievement level of acceptability dimension was 71.5 % which was judged to be good and requiring some improvement. More than half (55%) of client were very satisfied or

satisfied on the OTP service received. nearly 50% of caregivers participated in the study travelled greater than 30 minutes to get service at the HPs. 78%(180) of caregivers were satisfied with the availability of OTP services, HEWs and appropriateness of therapy prescribed. majority,345 (84%) of caregivers were dissatisfied with the convenience of working hour of OTP at the next appointment at HPs. Client satisfaction was found to be associated with household income, ethnicity, educational status and distance travelled in minutes were the factors which determine client satisfaction.

8.1.4. Overall OTP service implementation

The overall OTP service was determined based on the three dimensions achievement score, it was 70.8%.consequently, the overall implementation status OTP was good based on the judgement criteria. So that, Major and minor areas of the program implementation needs urgent revision and improvement.

8.2. Recommendation

Based on the finding of this evaluation, the following recommendations are drawn.

8.2.1. To Health Extension Workers of Konso Special Woreda.

Health care providers have a great role in improvement of OTP service .according to this study, there were areas of program that need to be improved by health extension workers

1. Health extension workers are recommended to adhere to guideline during assessing, classifying, and treating and referring children with SAM and counsel caregivers to provide quality OTP services to the community.
2. Health extension workers are recommended to maintain content completeness of OTP registration books as guideline.

8.2.2. To Segen Zone Health Department & Konso Special Woreda health office

1. Segen Zone Health Department in collaboration with Konso Special Woreda health office is recommended to timely and adequate Supply of routine essential medications, such as, Amoxicillin tabs, ORS, Zinc and amoxicillin syrup regularly.
2. Segen Zone Health Department in collaboration with Konso Special Woreda health office is recommended to timely and adequate Supply of IP and patient safety materials, such as safety box frequently
3. Segen Zone Health Department in collaboration with Konso Special Woreda health office is recommended to frequent supply of HMIS recording and reporting formats for health posts.

4. Segen Zone Health Department in collaboration with Konso Special Woreda health office is recommended to provide refresher training and supportive supervision for HEWs to improve compliance during care provision for children.
5. Segen Zone Health Department in collaboration with Konso Special Woreda health office is recommended to build improved water supply sources, incinerators and sanitation facilities in the health posts.

8.2.3. For ministry of Health and SNNPR regional health Bureau

1. FMOH in collaboration with SNNPR is recommended to provide emergency transport vehicles to health posts.
2. FMOH in collaboration with SNNPR is recommended to the construction of additional health posts to decrease the distance travelled to access OTP services and increased client satisfaction.

8.2.4. For researchers/ Evaluators

1. To conducted household surveys to assess acceptability. Since, Client exit interviews are a biased sample as those who stay away from the facility because of socio-cultural barriers will be missed.

Chapter-9: Meta-Evaluation

Ensuring the quality of the evaluation is important to increase its acceptance and utility. And this was done by self-assessment through Meta evaluation standards. Meta-evaluation was done by taking account the 30 standards encompassed within four attribute.

9.1: Utility standards

To ensure the utility of evaluation we thoroughly identified and involved important stakeholders during evaluability assessment for indicator selection and included their interest necessary for OTP program improvement. The judgment criteria for the evaluation of OTP service for this evaluation were set by stakeholders and the indicators are also commented by them. Moreover, we make involvement of stakeholders in each stage of evaluation.

The evaluation process was conducted with a standard way by consulting advisors and different stakeholders. The evaluation questions were the needs of stakeholders and the finding at the end will be disseminated timely according to the interest of the stakeholders. This all will assure the evaluation finding by the target beneficiary.

9.2: Feasibility standards

To ensure the evaluation procedures practical, minimize disruption, obtain relevant and needed information, competent and qualified data collectors were recruited and trained. While planning and conducting the evaluation, different positions of various interest groups was anticipated so that their cooperation had been obtained. This evaluation was efficient and produces information of sufficient value to justify the use of resources.

9.3: Propriety standards

Evaluation purpose and question, evaluation reports, evaluation procedures and schedule, privacy, dignity, confidentiality data, and rights of participants and evaluation resources were agreed. All data collection tools were designed by considering the ethical and legal issues for the rights and welfare of the study participant were considered. The data collection was complete and optimal in assessing the OTP. Stakeholders agreed and consensus reached to do this process evaluation before starting the evaluation and Conflict of interest was dealt with openly and honestly.

9.4: Accuracy standards

The purpose, procedures and approaches of evaluating OTP were described in detail. The information collected, processed and, reported in an evaluation were systematically reviewed and any errors found were corrected. In order to address the evaluation questions in the evaluation, respective quantitative and qualitative analysis method was chosen and also data was triangulated to improve accuracy.

In order to prevent against distortion caused by personal feelings and biases of any party to the evaluation, evaluation results fairly reflect the evaluation findings. Lastly, the summary of the program evaluation standards was used in judging this evaluation report is presented in the table below.

Summary of Meta-evaluation

- ❖ Meta Evaluation was conducted by Konso Special Woreda Monitoring evaluation officer
- ❖ Meta evaluation tool was adapted from Daniel L. Stufflebeam(127).
- ❖ The tool contains 4 standards, 30 sub standards and 85 items (checkpoints).
- ❖ The Judgment parameter was decided to be Excellent, if >85% V. Good, if 75-85%, Good, if 60-74% Fair, if 45-60% Poor, if <45%.
- ❖ The result showed that the overall score of meta evaluation against the four standards was measured as Very Good based on the judgment parameter; which was 83.3%

Table 27.summary of meta-evaluation report of OTP at health posts of Konso Special Woreda, 2018.

Standards	No- Sub standard	Total criteria	Criteria Met	Percent	Judgment parameter
Utility	7	21	18	85.7	Excellent
Feasibility	3	10	7	70	Good
Propriety	8	24	21	87.5	Excellent
Accuracy	12	30	27	90	Excellent
Total	30	85	72	83.3	V. good

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Annexes

Annex _A. checklist used to collect data for availability dimension

E. Resource inventory Checklist used to assess readiness of facility and availability of resources

Resource inventory tool to measure the readiness of PHCUs of Konso Special Woreda, 2018

Complete this questionnaire by interviewing the heads of the facilities, store keeper and department heads and by directly observing the available resources.

E.1.Consent for Observation and Interview:

Good morning! My name is _____; I am working with a study team from Jimma University. I am here today to observe resources available for implementation of OTP in your health institution. All comments are welcome; with your permission, I will use a tape recorder to ensure the quality of the data collection for the interview. I would like to confirm that all your comments are confidential and will be used for evaluation of the OTP only.

All findings of the inventory will be kept confidential and shared only the finding between evaluation team. Further we will ensure that any information we include in our report does not identify you as the respondent Remember, everything will be undertaken with your agreement and your willingness will be respected.

Declaration of the volunteer

Are you willing to participate in this study?

Yes _____, No _____ (Thank you.)

(S/he should declares his/ her willingness to give the interview and signed in hard copy paper.)

If you agree sign here _____

E.2.General information

1. Code given to checklist _____
2. Name of Health facility _____
3. Head of the facility and assigned code _____

E.3. General Infrastructure of the facilities

	Interviewer: Observe and interview the conditions and infrastructure in the facility and mark that apply	Availability	
		yes	no
I	Basic facility amenities: Are the following features present		
1	Availability of OTP services provided daily		
2	Availability of Room with auditory and visual privacy for patient consultations		
3	Availability of communications equipment /telephone line		
4	Availability of computer and internet access		
5	Availability of electricity light source		
6	Availability water source within 500 meters of facility		
7	Availability of 1 latrines per 25 persons with water access for clients		
8	Availability of Vehicles for Emergency transportation		
		Availability	
II	Availability Infection prevention and patient safety materials	yes	no

1	Availability of Disinfectant in the facilities		
2	Availability of Safe final disposal of sharps		
3	Availability of Safe final disposal of infectious wastes(incineration, open burning in protected area, dump without burning in protected area)		
4	Availability of Appropriate storage of sharps waste(puncture resistant bins of red, yellow and black colors in the facilities) and safety box		
5	Availability of Appropriate storage of infectious waste ((Waste receptacle (pedal bin) with lid and plastic bin liner.))		
6	Availability of Latex gloves		
7	Availability of Single use standard disposable or auto-disable syringes		
8	Soap and running water or alcohol based hand rub		
9	Guidelines for standard precautions		

E.4. Availability of material cards /job Aids for OTP

	Material cards / job aids	availability of on date of evaluation	
		Yes=1	No=2
1	OTP quick reference (is it in the appropriate local language?)		
2	Weight-for-height reference card		
3	RUTF reference card		
4	iCCM classification Algorithm wall chart		
5	MUAC classification table		
6	Target weight chart		
7	Appetite test card.		
	HMIS tools	Availability	
	Is the ff available	Yes/ no	
1	ICCM booklet chart		
2	OTP Cards for new admission		
3	OTP Registration book		
4	Monthly OTP Report form		
5	Tally sheets		
6	Referral form		
7	Stock card/ supply register		

E.5. Basic Medical Equipment and other Supplies required for OTP

No	List of medical Equipment and other Supplies	Observation	
		yes	No
	Check for availability	available on date of evaluation	
8	Weighing Salter scale (25 kg) with basin or pants		
9	MUAC tape		
10	Functioning electronic scale		
11	Length board		
12	Stadiometer (standing height measure)		
13	calculator		
14	Pens		
15	Scissors		
16	Clock with second hand		
17	Bucket with lid		
18	Soap for washing hands		
19	Small bowl		
20	Hand towels/paper towels		
21	Water jug (with lid)		
22	Plastic cups		
23	Metal spoons		
24	Tea spoons or medicine cups		
25	Thermometer		

E.6. Availability of Therapeutic Foods and essential drugs supplies for OTP

no	Therapeutic Food-and essential drugs	Units	Availability	
			Yes 1	No =2
Therapeutic food supplies				
1	RUTF(plumpy Nut/ BP-100)			
essential drugs supplies for OTP				
4.	Amoxicillin tablets			
5.	Amoxicillin syrup (125 mg/5 ml)			
6.	Standard ORS			
7.	Zinc sulphate			

E.7. Availability of appropriate store room for drugs and supplies of OTP

	List of items	yes	no
1.	Availability of appropriate store room for drugs and supplies of OTP		
2.	Appropriate Drugs and supplies store room		
	Storage is free from rodents or insects		
	Storage is Protected from sunlight		
	Storage has Sufficient space for the quantity		
	Storage space is Dry and free from flooding		

E.8. Availability of Human Resource

Staff profile of the selected health posts in Konso Special Woreda, 2018

Category	HEWs	Male	Female	Total
Health extension workers At health posts	HEWs in-service at the beginning of the year			
	HEWs in-service at data collection			
	HEWs left the facility			
	HEWs received in-service training			
others				

Name of data

Collector: _____

Date of

observation: _____

Signature: _____

Annex _B. checklist used to collect data for compliance dimension

A. data extraction format for evaluating contents of OTP medical records in the patient chart.

This data extraction tool is used to measure compliance of HCPs in terms contents of medical records at individual patient charts of children under five years of age from register review in health posts and health centers at admission, re-admission, and treatment follow up and discharge status for appropriately registered SAM children from Sep 11/2017-Mar.19/2018.

A.1.General information on document review checklist for client folder

1. Questionnaire number _____
2. Name of Health facility _____
3. Date of data extraction DD/MM/YY _____

No	Questions	Coding categories		
		Information is clearly recorded?		
I	Is the following information recorded in the OTP registration book?	Yes=1	No=2	Not indicated =3
I	Identification recorded			
1	Name of child recorded			
2	Age of child recorded			
II	Admission anthropometry recorded			
3	Date of admission recorded			
4	W/H % recorded at admission			
5	MUAC recorded at admission			
III	Discharge anthropometry recorded			
6	Date of discharge recorded			
7	W/H % recorded at discharge			
8	MUAC recorded at discharge			
9	Outcome status recorded at discharge			

A.2.General information for Administrative records and documents review checklist for health posts

1. Questionnaire number _____
2. Name of Health facility _____
3. Date of data extraction DD/MM/YY _____

A.3. Records review checklist for OTP at health posts of Konso Special Woreda, 2018

No	Questions Is the following recorded information is available in facility document?	Coding categories		Remark
		Recorded document is available?		
		Yes	No	
1	Is there OTP work plan documented and available in the facility			
2	Is there monthly OTP statistics report documented from sep.11/2017-March 19/2018 in the facilities			
3	Is there financial and costing issues documented and available in the facility			
4	Is there feedback given on supportive supervision reports documented and available in the facility			
5	Is there six months OTP performance report available			

F. Observation checklist prepared to measure the compliance of health extension workers

Observation checklist prepared to measure the compliance of health care provider during assessing, classifying and treating and or referring children and counselling caretakers on SAM service provided at PHCUs of Konso Special Woreda, 2018

Structured Checklist to observe Healthcare providers compliance on SAM services

Complete this checklist by observing each Healthcare provider's SAM practice

F.1. Consent form for care provider:

Hello! My name is _____ from _____.

I am working with a study team from Jimma University, public health Faculty, Department of Health monitoring and evaluation. I am here now to observe Health care providers practice while doing SAM procedure. You are kindly requested to participate in the study, which will have importance in improving the practice by identifying successes and gaps in the implementation. No information concerning you, as an individual will be passed to another individual or institution without your agreement. Your participation is voluntary and you have the right to decline fully or partially from the study.

Declaration of the volunteer

Are you willing to participate in this study?

Yes _____, No _____ (Thank you.)

(S/he should declares his/ her willingness to give the interview and signed in hard copy paper.)

If you agree sign here _____

F.2. Consent form for client/caregiver

Dear client:

This observation is undertaken to evaluate the practice of HCPs when giving service. This will help to improve the program and thus to provide you a quality service. Therefore you are kindly requested to allow the observation take place. Thank you.

If both of you agree to participate in the study, I will start collecting data and you can continue with your work.

Declaration of the volunteer

Are you willing to participate in this study?

Yes _____, No _____ (Thank you.)

(S/he should declares his/ her willingness to give the interview and signed in hard copy paper.)

If you agree sign here _____

F.3.General information on observation of HEWs to assess health care workers practice towards assessment and management of malnutrition in under-five children

1. Name of Health facility _____
2. assigned code to HEW _____
3. Age of Heath worker
 - a) 15-34
 - b) 35-39
 - c) 40-44
 - d) 45-49
 - e) ≥ 50
12. Sex of respondent. 1 Male () 2. Female ()
13. Marital status
 - a) Single
 - b) Married
 - c) Divorced/separated
 - d) Widowed
14. Working experience () Years
15. Do you receive in service training in the last 12 months
 - a) Yes
 - b) no
16. profession
 1. HEW
 2. Nurse (All type of nurse)
 3. health officer
 4. Others specify

Characteristics of children observed

- 1 Age of child
 - a. < 6 months
 - b. 6-59 months
 - c. ≥ 60 months
- 2 Sex of child
 - a. Male
 - b. female
- 3 Type of case
 - a. New case

b. Cases already in the program

F.4.direct observation checklist of SAM management

S.NO	Correct performance of SAM treatment process	practice		
		yes	no	NA
	List of items			
	General Assessment			
29.	Child correctly assessed for 4 general danger signs (able to drink/breastfeed, vomits everything, had convulsions, lethargy)			
1.5	Child checked whether child is able to drink/breastfeed			
1.6	Child checked whether child vomits everything,			
1.7	Child checked whether child has had convulsions			
1.8	Child checked whether child has lethargy			
30.	Child checked for presence of cough, diarrhea, fever, and malnutrition			
2.1	Child checked for cough or fast/difficult breathing			
2.2	Child checked for diarrhea			
2.3	Child checked for fever			
2.4	Child checked for edema			
2.5	Child checked for low MUAC or visible severe wasting			
2.6	Child checked for palmar pallor			
	Nutritional assessment			
31.	Child with oedema are correctly evaluated			
32.	Did HCP determine age of child based on recall of caregivers			
33.	Child's MUAC is correctly measured			
34.	Did HCP measure Weight accurately			
35.	Did HCP measure Height accurately			
36.	Did HCP measure Weight-for-height correctly			
37.	Did HCP do Child's appetite test using ready-to-use therapeutic food			
	B. clinical assessment			
38.	Did HCP Asks mother about history of any danger signs			
39.	Child's respiratory rate counted accurately			
40.	Child's temperature checked accurately			
41.	Child's pulse rate counted accurately			
	C. Classify nutritional status			
42.	Did HCP correctly classified for malnutrition			
43.	Child with danger signs correctly classified for danger signs			
44.	Child with complicated SAM correctly classified for SAM			
45.	Child with un complicated SAM correctly classified for uncomplicated SAM			
46.	Child with moderate malnutrition correctly classified for moderate malnutrition			

47.	Child with no malnutrition correctly classified for no malnutrition			
	Child correctly managed for malnutrition			
48.	Did HCP Calculate amount of RUTF for child and give the ration			
49.	Child receives correct medical treatment according to protocol			
50.	▪ Child needing Amoxicillin received			
51.	▪ Child needing Vitamin A received			
52.	▪ Child needing mebendazole received			
53.	▪ Folic acid given according to protocol			
	Child needing referral correctly referred			
54.	▪ First dose of antibiotics at referral			
55.	▪ Caretaker of referred child received referral note			
56.	▪ Caretaker of referred child received transportation assistance			
	Counselling of caretakers			
57.	Did HCP greet mothers/caregivers and are friendly and helpful			
58.	Did HCP Explain the reason and purpose of medical treatment to mother/caregiver			
59.	Did HCP Discuss all key messages with mothers/caregivers			
60.	Did HCP Ask mother/caregiver to repeat instructions on how to give medicine and RUTF			
13.	Did HCP Inform mother/caregiver about linking with other services, programs and initiatives (e.g., expanded program of immunization [EPI], voluntary counselling and testing [VCT], reproductive health)			

Name of data

Collector: _____

Date of observation: _____

Signature: _____

G. Exit interview guide for caregivers

Clients visit rating questionnaire

Exit interview of caregivers

District _____

Clients consent:

Here are some questions about the health care you just received in this health facility. Currently study is being conducted in this district with the aim of improving the health care. Since clients are receivers of the services asking your view on health services is very important for quality improvement. And thus you are selected to give your view on some of the questions about the health services. The result of this study will be used for improvement of the quality of the health service in this health unit and the district. All views you provide for us will not in any case be disclosed to anyone, only used for the research purpose. As you answer I would like you to answer referring only to the health care provider you saw today (or on your last visit).

Thanks for your willingness.

Client’s view on health service after visit at the Primary health care level

Instruction- Here are some questions about the visit you just made. **In terms of your view or Your satisfaction how you would rate each of the following questions (11-31)**

1. BACKGROUND INFORMATION OF THE CLIENT AND FACILITY IDENTIFICATION

PART-1

S.no	Questions	responses	remark
1	Client’s identification number	_____	
2	Date of interview DD/MM/YY	_____	
3	Facility name	_____	
4	Age of client	_____	
5	Addresses of the client		
6	Employment status of the respondent	1 government employed 2 self-employee 3 student 4 unemployed	
7	Marital status of the client	1. Married 2.Unmarried 3. Divorced 4. Widowed	

		5.other _____	
8	Educational grade completed by the client	1. No education 2. Read and write 3. Primary 4.Secondary 5. diploma & above	
9	Household Income. (per year, in birr) Add all the income of the household (not only the client's income)	1. <1000 2.1001-5000 3. 5001-10000 4. 10001-15000 5. More than 15000	
10	Religion of the client	1. Protestant 2 Orthodox 3. Muslim 4. Catholic 5. Others _____	
11	Ethnicity	1.konso 2.Amara 3.Gamo-goffa 4.oromo 5.others	

PART-2

Health system related information/ access to OTP

- 1 Location of health post 1.Outside the resident area 2.In the resident area
- 2 Distance travelled in minutes to reach HP 1. ≥30 min 2.<30 min
- 3 Method of transport 1.car 2.on foot
- 4 Convenience to attend OTP service based on appointment 1.yes 2. No
- 5 Time of OTP working day was suitable 1.yes 2.no
- 6 Time spent in Waiting room before getting service 1.>15 min 2.≤15 min

PART-3

		1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
I	Timeliness of consultation					
1	How satisfied are you with the length of time spent waiting to get consultation	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
2	How satisfied are you with the length of time you spent during consultation	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
II	Appropriateness: of diagnostic services, treatment efficacy, access and cost of the services					
3	How satisfied are you with the availability of OTP services when needed	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
4	How satisfied are you with the availability of HCPs present when needed	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
5	How satisfied are you with the convenience of OTP service to working hour	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
6	How satisfied are you with the convenience of OTP service to working day	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
7	How satisfied are you with the appropriateness of therapy prescribed by the HEW.	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
III	Structure of Facilities					
8	How satisfied are you with the cleanliness of any instrument or equipment used by the health workers to treat or examine your child?	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
9	How satisfied are you with cleanness of the facility	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
10	How satisfied are you with the privacy rooms of the facility	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied

IV	Interpersonal qualities of service providers					
11	How satisfied are you with the personal manner (courtesy, respect, sensitivity, friendliness) of the HCP	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
12	How satisfied are you with the clearness and completeness of explanation given to you by the health	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
13	How satisfied are you with the technical skills /completeness of the information given to you about your child's problem?	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
14	How satisfied are you with the technical skills of the health worker you attended was competent	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied
15	How satisfied are you with the overall quality of care You received today in this clinic	1.Strongly Satisfied	2.Satisfied	3.Neutral	4.Dissatisfied	5. Strongly dissatisfied

Annex _D. in-depth interview guide for HEWs

C. In-depth Interview Guide for health extension workers used to assess capacity of the facilities and related facilitators and barriers of OTP implementation at PHCUs of Konso Special Woreda, 2018

C.1. Informed Consent form for HEWs

Good morning (Afternoon/evening). My name is _____ I am from Jimma University Post Graduate Student of Health Program Monitoring and Evaluation. We are going to do process evaluation of the therapeutic feeding program in children with Severe Acute Malnutrition at primary health facilities of konso special woreda

This study conducted to see what look likes the implementation status of OTP service and the finding of evaluation helps for program improvement. Your information highly support our evaluation process and mainly for program improvement. All findings of the interview will be kept confidential. The finding shared only with evaluation team. Further we will ensure that any information we include in our report does not identify you as the respondent. If you choose not to participate in our study you will not penalized in any way but your participation has great contribution for the study if you accept to participate and you change your opinion later. You can also ask me to interrupt the interview whenever you went.

Do you agree? A. Yes B. No

If yes signature _____

The interview A. completed B. refused

C.2. General Background information on Interview Guide for HEWs

1 Name of Health facility _____

2 Number of HEWs working at the HP _____

3 Age of Heath worker

a) 15-34

b) 35-39

c) 40-44

d) 45-49

e) >= 50

4. Sex of respondent. 1 Male () 2. Female ()

5. Marital status

a) Single

b) Married

c) Divorced/separated

d) Widowed

6. Working experience () Years

7. What is your profession

1. HEW

2. Non-HEW

C.3.In-depth-Interview guide for HEWs- on Success and failure related factors in implementation of OTP

1. Do you receive in service training on ICCM guidelines and protocols?
 - a. If yes, when and who provide it?
 - b. If not, why? and what are the barriers
 - c. What steps should be taken to solve the problems?
2. Do you have a copy of ICCM guideline?
 - a. If yes, do you practice SAM management using ICCM guideline?
 - b. do you feel difficulty in using this guideline and what are the difficulties if any
 - c. If you don't have a copy of SAM guideline, what are the barriers
 - d. What steps should be taken to solve the problems?
3. Do you do community Mobilization?
 - a. If yes, how do you do community Mobilization?
 - b. Who is doing it and how do you involve the community,
 - c. if not, what are the challenges you face in community mobilization, active case finding and treatment?
 - d. How did you address the challenges?
4. Do you do community active case finding and referral?
 - a. If yes, how do you do community active case finding and referral?
 - b. Do you think most of the children with SAM identified?
 - c. If not why? and what was the challenges
 - d. How do you address the challenges
5. Is the separate plan for OTP in your facility?
 - a. If yes, has the OTP being implemented as planned? Strength and weakness, achievement?
 - b. If not, what are the barriers and what steps should be taken to solve the problems?
6. Does the OTP program meet the coverage needs in the village/community?
 - a. If yes, Are there areas and population groups that have not accesses this service
 - b. If not, why and what are the barriers?
 - c. What steps should be taken to solve the problems?
7. Are there clients that have defaulted from the program?
 - a. If yes, how many children default?
 - b. Why do clients default from the OTP program

- c. Is there a system to follow up on defaulters and How does it work?
 - d. How could we encourage children to return for treatment?
8. Is there a functional referral system for SAM cases between HCs, HPs and higher facilities?
- a. If yes, how do children usually come to the clinic for OPT?
 - b. How are clients referred to your program?
 - c. Who refers them?
 - d. How are they transported?
 - e. If not, why? What are the barriers and
 - f. What steps should be taken to solve the problems?
9. Do you conduct home Follow up of patient in the program?.
- a. If yes, how often do you conduct follow up? ,
 - b. What actions do you carry out during follow up?
 - c. What are the major achievements and challenges?
 - d. If not, why not? And what steps could be taken to address these challenges?
10. Do you experience shortages of equipment and other Supplies for the program?
- a. If yes, what equipment & other Supplies are in short supply?.
 - b. Why you experience shortage. of equipment and other Supplies
 - c. What steps should be taken to solve the problems?
11. Do you experience shortages of RUTF and other therapeutic food supplies,
- a. if yes, why and what are the barriers?
 - b. What steps should be taken to solve the problems?
12. Do you experience shortages of drugs/medicines for the program?
- a. If yes, what are the drugs in short supply in the last six months?
 - b. Why are experiencing shortages drugs/medicines and what are the barriers?
 - c. What steps should be taken to solve the problems?
13. Do you experience shortages of Recording and reporting formats required for OTP from woredas?
- a. If yes, what monitoring tools are in short supply
 - b. Why you are experiencing shortages HMIS tools and
 - c. what are the barriers?
 - d. What steps should be taken to solve the problems?
14. Is monitoring and supportive supervision conducted at the HP?
- a. If yes, how is the monitoring and supportive supervision done?

- b. In the past one month, who visited you?
- c. Do you get written feedbacks after supervision?
- d. If not, what are the barriers and what steps should be taken to solve the problems?

Thank you for your time!

Received date _____
Thank you very much for participating in this study. The information you have provided will contribute to understanding the reasons which influence compliance to national SAM standard guidelines.

Annex _E. Key informant interview guide for head of health centers and woreda health office.

B. Key informant In-depth Interview Guide for woreda health office head used to assess capacity of the facilities and related facilitators and barriers of OTP implementation at PHCUs of Konso Special Woreda, 2018

B.1. Informed Consent form for woreda health office head

Good morning (Afternoon/evening). My name is _____ I am from Jimma University Post Graduate Student of Health Program Monitoring and Evaluation. We are going to do process evaluation of the therapeutic feeding program in children with Severe Acute Malnutrition at primary health facilities of konso special woreda

This study conducted to see what look likes the implementation status of OTP service and the finding of evaluation helps for program improvement. Your information highly support our evaluation process and mainly for program improvement. All findings of the interview will be kept confidential. The finding shared only with evaluation team. Further we will ensure that any information we include in our report does not identify you as the respondent. If you choose not to participate in our study you will not penalized in any way but your participation has great contribution for the study if you accept to participate and you change your opinion later. You can also ask me to interrupt the interview whenever you want.

Do you agree? A. Yes B. No

If yes signature _____

The interview A. completed B. refused

B.2. General Background information on Interview Guide for woreda health office head

1. Name of your institution _____
2. Code given to respondent _____
3. Date of interview DD/MM/YY _____
4. Place of interview _____
5. Age and sex of respondent _____, _____
6. What is your profession? _____
7. Years of experience _____
8. What is your position/job currently in the institution? _____

B.3.Konso Special Woreda health office head interview guide

Used to assess success and failure related factors of the enabling environment for OTP

KII guide for heads of health centres and WoHo head

Part-1.socio-demographic information

- a. age
- b. sex
- c. work experience
- d. profession
- e. position

Part-2.interview guide

2. Is the booklet chart disseminated and in use at the health facility?
 - a. If, not, why?
 - b. what are the barriers
 - c. what measures taken to solve it
3. Is there shortages of equipment, drugs, RUTF and trained human for the program?
 - a. If yes, why?
 - b. what are the barriers
 - c. what measures taken to solve it
4. Is there shortages of HMIS tools required for OTP
 - a. If yes, why?
 - b. what are the barriers
 - c. what measures taken to solve it
5. Is there at least one trained HEW to implement OTP in all your facilities?
 - a. If, not, why?
 - b. what are the barriers
 - c. what measures taken to solve it
6. is there shortage of basic amenities in the HPs
 - a. OTP service
 - b. tape water
 - c. client latrine
 - d. store room
 - e. ambulance
7. is there shortage of IP and patient safety materials
 - a. handwashing facility
 - b. safety box
 - c. safe final disposal of wastes
8. is there shortage of HMIS tools
 - a. reg. books

- b. booklet chart
- c. reporting format
- 9. do you conducted ISS regularly
 - a. If, not, why?
 - b. what are the barriers
 - c. what measures taken to solve it
 - d. Thank you for your time!

Name of interviewer _____

Name of Note taker _____

Figure 7-monthly statistics report of outpatient therapeutic feeding program

RECORDING AND REPORTING

MONTHLY STATISTICS REPORT - MANAGEMENT OF SEVERE ACUTE MALNUTRITION - THERAPEUTIC FEEDING PROGRAMMES														
FACILITY							Implementing agency/ Health facility							
REGION							Report prepared by							
ZONE							MONTH / YEAR of reporting (ethio calendar)							
WOREDA							TYPE OF PROGRAMME	<i>In-patient</i>	<i>Out-patient</i>	<i>Mobile clinic</i>				
OPENING DATE														

Group age	Total beginning of the month (A)	New admissions				Re-admission (B4) after defaulting	Transfer in (B5) from another therapeutic unit	Total admissions (C)	Discharges (D)						Transfer out (E)		Total discharges (F)	Total end of the month (G)
		W/H<70% or MUAC<110mm (children) or MUAC<180mm (adults) (B1)	EDEMA (B2)	Relapse (B3)					CURED (D1)	DEATH (D2)	UNKNOWN (D3)	DEFAULTER (D4)	NON-RESPONDER (D5)	MEDICAL TRANSFER (D6)	Transfer out (E1) to out-patient	Transfer out (E2) to in-patient		
< 6 months																		
6-59 months																		
5-10 years																		
11-17 years																		
> 18 years																		
TOTAL																		
									%	%	%	%	%	%	%	%	%	

Figure 8-outpatient treatment card-front page

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD									
NAME					Reg. N°	/ /			
AGE (months)		SEX	M	F	DATE OF ADMISSION				
ADMINISTRATIVE UNIT					TIME TO TRAVEL TO SITE				
COMMUNITY					FATHER ALIVE				
HOUSE DETAILS/LANDMARKS					MOTHER ALIVE				
NAME OF CAREGIVER					TOTAL NUMBER IN HOUSEHOLD				
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)		WEIGHT (kg)		HEIGHT (cm)		WEIGHT FOR HEIGHT			
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					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)			Measles immunisation	no	yes	date:		
	Malaria treatment			Fully immunised	no	yes			
2nd VISIT:									
	Mebendazole								
OTHER MEDICATION									
DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE				

Figure 9-outpatient treatment care -back of card

FOLLOW UP: OUTPATIENT CARE

NAME		REG.Nº															
Week	ADM. (=0)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Date																	
ANTHROPOMETRY																	
Bilateral Pitting Oedema (+ ++ +++)				*		*											
MUAC (mm)																	
Weight (kg)																	
Weight loss * (Y/N)																	
Height (cm)																	
Weight for Height																	
* If below admission weight on week 3 refer for home visit; If no weight gain by week 5 refer to inpatient care																	
HISTORY																	
Diarrhoea (# days)																	
Vomiting (# days)																	
Fever (# days)																	
Cough (# days)																	
PHYSICAL EXAMINATION																	
Temperature (°C)																	
Respiratory rate (#/min)																	
Dehydrated (Y/N)																	
Anaemia / palmar pallor (Y/N)																	
Skin infection (Y/N)																	
APPETITE CHECK / FEEDING																	
RUTF test (Passed/Failed)																	
RUTF (# units given)																	
ACTION / FOLLOW UP																	
ACTION NEEDED (Y/N)																	
Other medication (see front of card)																	
Name of Examiner																	
VISIT OUTCOME																	
OK= Continue A= Absent D= Defaulted for 3 visits R= Referral RR= Refused referral C= Cured NR= Non-recovered HV= home visit X= Died																	
ACTION TAKEN DURING FOLLOW-UP (INCLUDE DATE)																	
Name of outreach worker:																	

Figure 10-Home visit record form

8 HOME VISIT RECORD FORM

Reason for Home Visit:		Absence Y/N	For follow-up Y /N
Unique SAM #	<input type="text"/>	<input type="text"/>	Date <input type="text"/>
OTP SITE _____	OTP Site # _____	Kebele _____	Woreda _____
CHILDS NAME _____	Age _____	Sex _____	
FAMILY NAME _____	NAME OF THE CARER _____		
ADDRESS _____			
DATE VISITED	<input type="text"/>		
Findings	<i>Defaulter, dead, other (specify)</i>		
<input type="text"/>			
Outreach worker name	_____		Signature _____

9 COMMUNITY WORKERS REFERRAL SLIP

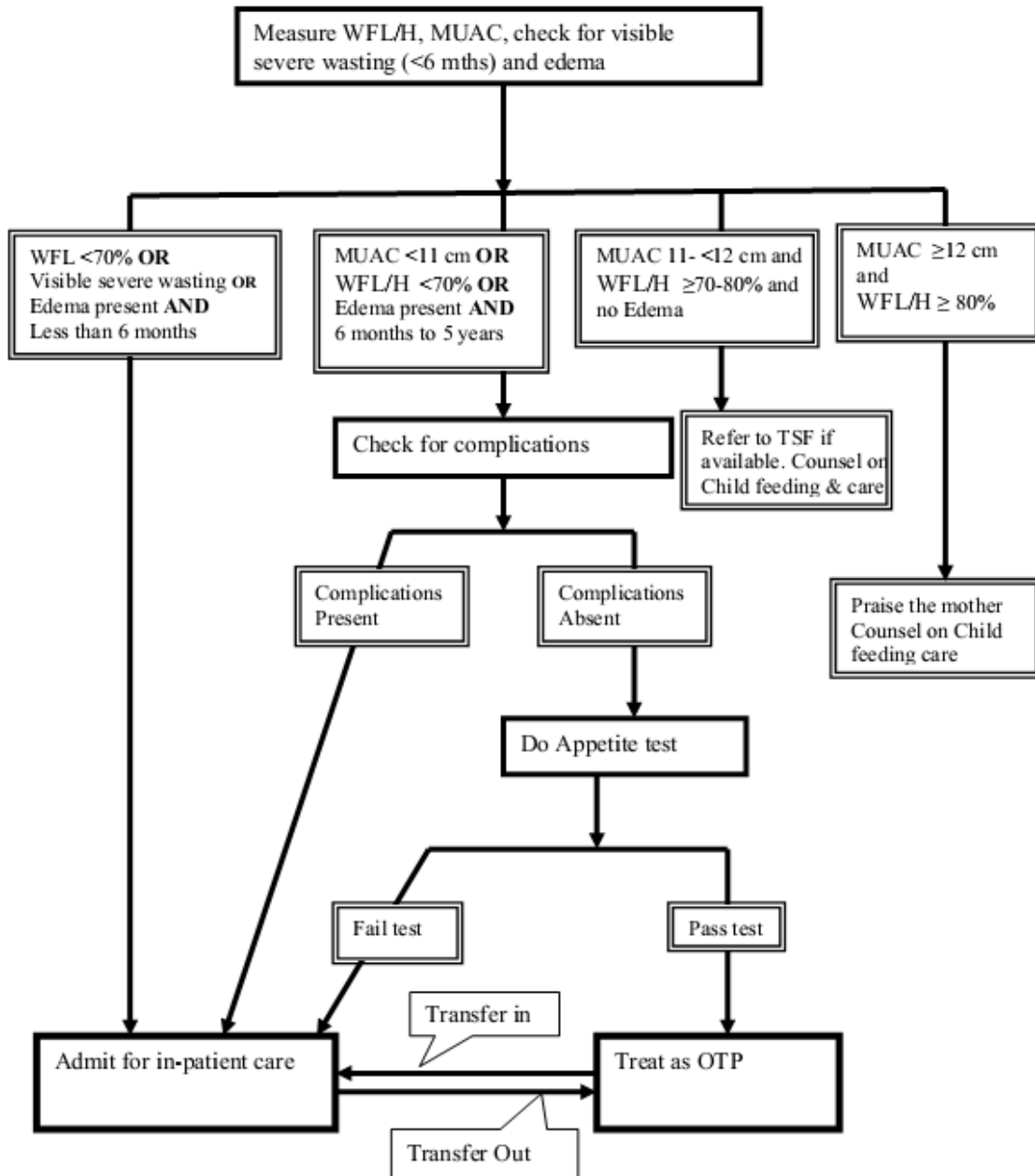
Referral slip after screening at community level			
OTP SITE _____	Kebele _____	Woreda _____	
CHILDS NAME _____	Age _____	Sex _____	
FAMILY NAME _____	NAME OF THE CARER _____		
ADDRESS _____			
DATE VISITED	<input type="text"/>	MUAC <input type="text"/>	OEDEMA <input type="text"/> Y / N
Other Findings	<input type="text"/>		
<input type="text"/>			
Community Health Worker name	_____		Signature _____

Serial #	Full Name	Address	Age (months/ Year)	Sex (F/M)	New admission (Y/N)	Transfer or Readmission (Y/N)	Admission			Discharge			outcome (cured, dead, unknown, transfer, non-responder)	Remark	
							Date	Weight (Kg)	Oedema (y/N)	MUAC (cm)	Date	Weight (Kg)			Oedema (y/N)
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

Figure 11.OTP registration book

1.0. Recommended criteria for admission to OTP

You used this admission procedure and the Assess and classification table in session 2 of the module. You can review to better identify children with SAM who need OTP.



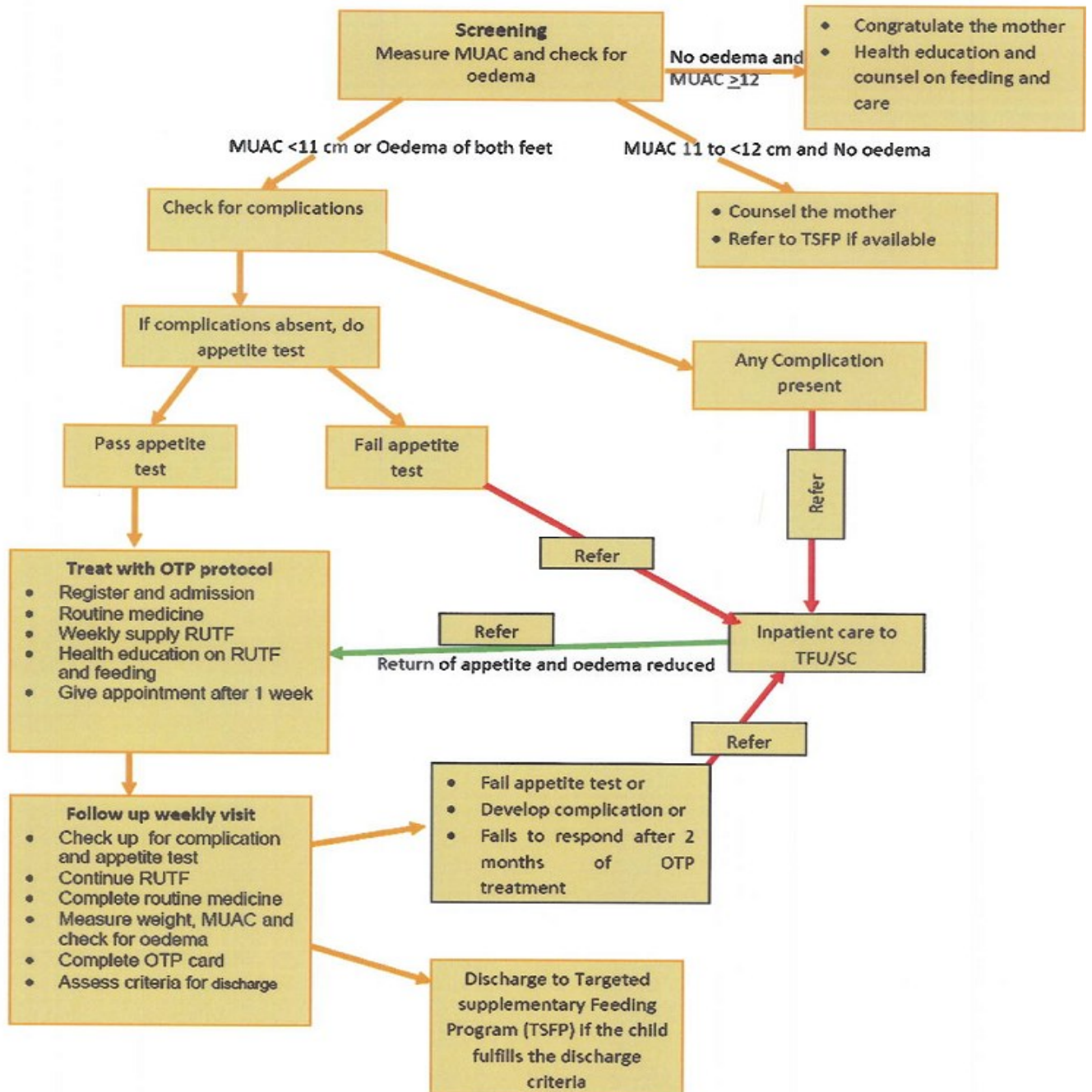
Admission Procedure Algorithm

Equipment and Supplies for OTP Equipment (per site)*Table 28. Equipment and drug supplies for OTP evaluation at KSW, 2018*

S.No	List of equipment	quantity
1	File for admission cards	1 per clinically
2	Soap for hand washing	1 bar
3	Water jug (with lid)	2
4	Plastic cups	10
5	Metal spoons	2
6	Thermometer	3
7	Salter scale (25 kg) plus pants	1
8	Height board	1
9	MUAC tape	5
10	Weight-for-height reference card	1
11	SAM classification wall chart	1
12	Target weight	1
13	Appetite test card.	1
14	SAM management reference card	1
15	RUTF reference card	2
16	Outpatient care cards for new admissions	100
17	Outpatient care ration cards for new admissions	100
18	Registration books	
19	Formats for reporting	
20	Drinking water	1 jerry can
21	Sugar to make 10 % sugar solution	500 g
22	RUTF	2 months stock(16 carton)

S.No	Medicines per 500 children per OTP site	Amount
1	Amoxicillin syrup 125mg/5ml	500 bottles
2	ReSoMal	2 packets
3	Zinc	10 tubes

Item	Minimum stock/month
Plumpy'Nut or BP 100	4 cartoon/week or 16 cartoon/month
Amoxicillin	½ tin
Mebendazole 100mg	1 tin
Folic Acid	15 tabs
Vitamin A capsule	30 capsule
Measles vaccine	
Plastic cups	2
Drinking water	1 Jerry can
Salter scale (25kg) plus pants or plastic basin	1
MUAC tape	2
Thermometer	1
Soap for hand washing	1
OTP card	30
Registration book	1
Stock card/supply register	1



Flow Chart for Assessment and Action for children between 6 months and 18 years

Figure 12. flow chart for assessment of SAM children and action taken

ዕድሜው ከ2 ወር - 5 ዓመት ለሆነው ህፃን የሚደረግ ምርመራ፣ ስያሜና የህክምና ልዩታ

ህፃኑን ያስቀምጠዋል?

ተቅማጥ ካለው

ጠይቂ

ተመልከቺ! አጻምጪ

- ስንት ቀን አስቀመጠው?
- ተቅማጥ ደም የቀላቀለ ነው?
- የህፃኑን ጠቅላላ ሁኔታ አስተውይ ፍገገዝ ብዛድ ወይም ራሱን ስታል? ያለማቅረጥ የሚወራጭ ወይም ነጭ ናጫ ነው?
- አይኖቹ ወደ ውስጥ ተሰርጉደዋል?
- ለህፃኑ የሚጠጣው ፈሳሽ ስጪው፣
 - ምንም መጠጣት አይችልም ወይም አጠጣጡ ደካማ ነው?
 - ተስጋጠን ወይም ተጠምቶ ነው የሚጠጣው?
- ሆዳ/ካሉ ላይ ቆዳውን ቆንጠጥ አድርገሽ ተመልከቺ የተቆነጠጠው ወደ ቦታው የሚመለስው
 - በጣም ቀስ ብሎ /ከ 2 ሰዓት በላይ/ ነው?
 - ቀስ ብሎ /በ2 ሰዓት ውስጥ/ ነው?

ሁሉም ህፃናት ለዲሃድሬሽን

ተቅማጥ ስይሚ

ተቅማጥ 14 ቀን እና ከዚያ በላይ ለሆነው

ተቅማጥ ደም ካለው

ግልጽነት	ስያሜ	ህክምና
ከዚህ በታች ከተጠቀሱት ሁለቱ ክፍሎች ▶ ፍገገዝ ያለ ወይም ራሱን የሳተ ▶ አይኖቹ የተሰረገዱ ▶ ምንም መጠጣት የማይችል ወይም ደካማ አጠጣጥ ያለው ▶ የተቆነጠጠው ቆዳው በጣም ቀስ ብሎ የሚመለስ	ጠቂ ዲሃድሬሽን Severe dehydration	▶ እናቱ ልጇን ወደ ጤና ጣቢያ/የህክምና ለህክምና መውሰድ እንዳለባት አስረጃጅታለሁምኛት። ▶ በፍጥነት ወደ ጤና ጣቢያ/የህክምና ለኪው፣ ስትልኪው እናቱ ህጻኑን በመንገድ ላይ ለልጁ የምታጠጣውን ኦ እር አስ ስጫት ▶ ጡት ቶሎ ቶሎ እንድታጠባው ምክራያት
ከዚህ በታች ከተጠቀሱት ሁለቱ ክፍሎች ▶ ያለማቅረጥ የሚወራጭ ወይም ነጭ ናጫ ▶ አይኖቹ የሰረገዱ ▶ የተጠማ ወይም ተስጋጠን የሚጠጣ ▶ የተቆነጠጠው ቆዳው ቀስ ብሎ የሚመለስ	መካከኛ ዲሃድሬሽን Some dehydration	▶ በጥላን ቢ መሰረት ፈላጊ እና ምግብ እንዲወሰድ አድርገ ▶ ቢንክ ለ10 ቀን ስጪው ▶ እናት ቀጠርን ሳትጠብቅ ህፃኑን ይጠብቅ፣ የምትመሰከው መቸ እጁን ምክራያት ▶ ካልተሻለው በ5ኛው ቀን እንዲመለስ አድርገ
▶ በመልከኛ ወይም ከጤና ዲሃድሬሽን ለመካተት በቂ ምልክቶች የሌሉት	ዲሃድሬሽን የሌለው No dehydration	▶ በጥላን እ. መሰረት የተቅማጥ የቤት ውስጥ ህክምና አድርገ ▶ ቢንክ ለአስር ቀን ስጪው ▶ እናት ቀጠርን ሳትጠብቅ ህፃኑን ይጠብቅ፣ የምትመሰከው መቸ እጁን ምክራያት ▶ ካልተሻለው በ5ኛው ቀን እንዲመለስ አድርገ

▶ ዲሃድሬሽን ካለው	ጠቂ እና የቆየ ተቅማጥ Severe persistent diarrhoea	▶ ቫይታሚን እ. ስጪው ▶ እናቱ ልጇን ወደ ጤና ጣቢያ/የህክምና ለህክምና መውሰድ እንዳለባት አስረጃጅታለሁምኛት። ▶ በፍጥነት ወደ ጤና ጣቢያ/የህክምና ለኪው፣ ስትልኪው እናቱ ህፃኑን በመንገድ ላይ ለልጁ የምታጠጣውን ኦ እር አስ ስጫት ▶ ጡት ቶሎ ቶሎ እንድታጠባው ምክራያት	መውሰድ
▶ ምንም ዲሃድሬሽን ከሌለበት	የቆየ ተቅማጥ Persistent diarrhoea	▶ ቫይታሚን እ. ስጪው ▶ እናቱ ልጇን ወደ ጤና ጣቢያ/የህክምና ለህክምና መውሰድ እንዳለባት አስረጃጅታለሁምኛት። ▶ ወደ ጤና ጣቢያ/የህክምና ለኪው። ▶ ጡት ቶሎ ቶሎ እንድታጠባው ምክራያት	ምታርስበትን ጣሳው መቸ መለስ
▶ ተቅማጥ ደም የቀላቀለ ከሆነ	የደም ተቅማጥ Dysentery	▶ እናቱ ልጇን ወደ ጤና ጣቢያ/የህክምና ለህክምና መውሰድ እንዳለባት አስረጃጅታለሁምኛት። ▶ በፍጥነት ወደ ጤና ጣቢያ/የህክምና ለኪው። ▶ ጡት ቶሎ ቶሎ እንድታጠባው ምክራያት	ጣቢያ ላኪ ምክራያት ጣሳው መቸ

Figure 13.2 months-5 years classification algorithm chart

የምግብ እጥረት በሽታ መኖሩን አጣሪ

ተመልከቱ! ዳስሺ

ከ 6 ወር በታች ለሆኑ ህፃናት

- በግልፅ የሚታይ ከባድ የሰውነት መከላከል እንዳለ አጣሪ
- የሚሰረገድ እብጠት በሁለት እግር ላይ እንዳለ አጣሪ

ከ6 ወር በታች ለሆነው ህፃን የምግብ እጥረት ደረጃን ሰይሚ

ምልክቶች	ሰያሚ	ህክምና
<ul style="list-style-type: none"> ▶ በግልፅ የሚታይ ከባድ የሰውነት መከላከል ወይም ▶ ሁለቱም እግር የሚሰረገድ እብጠት ካለው 	<p>የተወሰነበ ከባድ የምግብ እጥረት</p> <p>Severe complicated malnutrition</p>	<ul style="list-style-type: none"> ▶ የመጀመርያ ደብ እየጠበቀ ስጦታ ▶ እብጠት ካለው እና ባለው 6 ወር ውስጥ ካልጠበቀ የመጀመሪያውን ደብ ቫይታሚን እ ስጦታ ▶ ለእናንተ ህጻን ራራ-ራ እንደሚያሰጡ አስረጃጉ ▶ የደም ስኬር ማስ እንዳይኖር አድርጉ ▶ በአቅራቢያው ወዳለ ህክርታል ወይም ተጎዳ መታከሚያ ጣቢያ (SC) በፍጥነት ላከው ▶ እናንተ ህጻን ስትወሰድ ሙተቱን እንድትጠብቅ ምክረያት
<ul style="list-style-type: none"> ▶ የሚታይ ከባድ የሰውነት መከላከል እና ▶ ሁለቱም እግር እብጠት ካለው 	<p>አጠቃላይ የምግብ እጥረት የለውም</p>	<ul style="list-style-type: none"> ▶ የህጻን አመጋገብ ሁኔታን መርምሩ ▶ እናንተ ስለ ተገቢ የሆነን አመጋገብ ምክረ - የአመጋገብ ችግር ካለው በኛው ቀን እንዲመለስ ትጠረው - የአመጋገብ ችግር ካለው ተክቀጠውን አመክግኙ

6 ወር እና ከዚ በላይ ለሆኑ ህፃናት

- የግራ ከንድ ሚዋክ (MUAC) ለኪ
- ከ 11 ሲ.ሜ በታች ነው?
- ከ 11 እስከ <12 ሳ.ሜ ነው?
- ≥12ሳ.ሜ ነው?

ከ6 ወር በላይ ለሆነው ህፃን ሁሉ የምግብ እጥረት ደረጃን ሰይሚ

<ul style="list-style-type: none"> ▶ የግራ ከንድ ሚዋክ ከ 11 ሳ.ሜ በታች ወይም ▶ ሁለቱም እግር የሚሰረገድ እብጠት እና - የሰማዓ ምች የለው ወይም - ወግ/የደም ተቅማጥ የለው ወይም - የደም ተቅማጥ የለው ወይም - ትኩላት/መቀጠብ የለው ወይም - የምግብ ፍላጎት ምርመራን ያላለ 	<p>የተወሰነበ ከባድ የምግብ እጥረት</p> <p>Severe complicated malnutrition</p>	<ul style="list-style-type: none"> ▶ የመጀመርያ ደብ እየጠበቀ ስጦታ ▶ እብጠት ካለው እና ባለው 6 ወር ውስጥ ካልጠበቀ የመጀመሪያውን ደብ ቫይታሚን እ ስጦታ ▶ ለእናንተ ህጻን ራራ-ራ እንደሚያሰጡ አስረጃጉ ▶ የደም ስኬር ማስ እንዳይኖር አድርጉ ▶ በአቅራቢያው ወዳለ ህክርታል ወይም አስተጋግ ማከሚያ ጣቢያ (SC) በፍጥነት ላከው ▶ እናንተ ህጻን ስትወሰድ ሙተቱን እንድትጠብቅ ምክረያት
<ul style="list-style-type: none"> ▶ የግራ ከንድ ሚዋክ ከ 11 ሳ.ሜ በታች ወይም ▶ ሁለቱም እግር የሚሰረገድ እብጠት እና - የሰማዓ ምች የለው ወይም - ወግ/የደም ተቅማጥ የለው ወይም - ትኩላት/መቀጠብ የለው እና የምግብ ፍላጎት ምርመራን ያለ 	<p>የልተወሰነበ ከባድ የምግብ እጥረት</p> <p>Severe uncomplicated malnutrition</p>	<ul style="list-style-type: none"> ▶ የOTF እንዲሁም እንዲያገኝ መገባደግ ▶ በመመርመር መላረት RUTF ሰጡ ▶ ልጅ የሁለት እግር እብጠት ካለው እና ባለው 6 ወር ውስጥ ካልጠበቀ የመጀመሪያውን ደብ ቫይታሚን እ ስጦታ ▶ እየጠበቀ ስጦታ ለ7 ቀን ስጡ ▶ ደም ማስ ካለው እንደ ባለ 5 ሚግ ራሊክ እላይ እንከብል ስጡ ▶ እናንተ ተጠርን ሳትጠብቁ ህጻን ይጠብቁት የምትመለሱ መቸ እንደሆነ ምክረያት ▶ በየ 4ኛ ክትትል እድርገላት የ OTF እንዲሁም ካልሸ ወዳለበት ላኩ
<ul style="list-style-type: none"> ▶ የግራ ከንድ ሚዋክ ከ 11 እስከ <12 ሳ.ሜ እና ▶ የሁለት እግር የሚሰረገድ እብጠት እብጠት የለውም 	<p>መለሰተኛ የምግብ እጥረት</p> <p>Moderate Acute malnutrition</p>	<ul style="list-style-type: none"> ▶ የህጻን የአመጋገብ ሁኔታ መርምሩ እስኪላኩ ከሆነ በአመጋገብ ምክር ቻርት ውስጥ ባለው መሰረት እንድትመገኙ ለእናንተ ምክረ ▶ የአመጋገብ ችግር ካለ በኛው ቀን እንዲመለስ ትጠረው ▶ የአመጋገብ ችግር ካለው በ 30 ኛው ቀን እንዲመለስ ትጠረው ▶ እናንተ ተጠርን ሳትጠብቁ ህጻን ይጠብቁት የምትመለሱ መቸ እንደሆነ ምክረያት ▶ የተጨማሪ የምግብ ማከሚያ (SFP) እንዲሁም ካልሸ የተጨማሪ የምግብ ስጦታ እንዲሁም ካልሸ የተጨማሪ የምግብ ማከሚያ (SFP) ወዳለበት ላኩ
<ul style="list-style-type: none"> ▶ የላይኛው ከንድ እየጠበቀ ከ12 ሲ.ሜ በላይ የሆነ እና ▶ የሁለት እግር እብጠት የለውም 	<p>የምግብ እጥረት የለውም</p> <p>No Acute malnutrition</p>	<ul style="list-style-type: none"> ▶ ለህጻን ከሁለት ዓመት እድሜ በታች ከሆነ የአመጋገብ ሁኔታውን በመመርመር እናንተ ስለ ህጻን አመጋገብ ምክረ - የአመጋገብ ችግር ካለው በኛው ቀን እንዲመለስ ትጠረው - የአመጋገብ ችግር ካለው ተክቀጠውን አመክግኙ ▶ እናንተ ተጠርን ሳትጠብቁ ህጻን ይጠብቁት የምትመለሱ መቸ እንደሆነ ምክረያት

- ሁለቱም እግሮቹ የሚሰረገድ እብጠት እንዳላቸው አጣሪ
- ሚዋክ ከ 11 ሳ.ሜ በታች ከሆነ ወይም የሚሰረገድ የ2 እግር እብጠት ካለ ለ5 አንድም የሚያወሳስብ የጠና ችግር ካለ የህጻንን የምግብ ፍላጎት (appetite) መርምሩ

Fever (no malaria)	<ul style="list-style-type: none"> ▶ እናንተ ተጠርን ሳትጠብቁ ህጻን ይጠብቁት የምትመለሱ መቸ እንደሆነ ምክረያት ▶ ትኩላት ካልሆኑ የክትትል ተጠር በ 2ኛው ቀን እድርገ ▶ ትኩላት ከ 7 ቀን በላይ በየቀኑ ከሆኑ ህጻን ወደ ጠና ጣቢያ ላኩ
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የደም ምነስ በሽታ መኖሩን አጣሪ

ተመልከቶች፣ ዳስሺ

- የገረጣ መዳፍ እንዳለው ተመልከቶ
 - በጣም የገረጣ መዳፍ
 - በመጠኑ የገረጣ መዳፍ

የደም ማነስ ደረጃ ስይሚ

ምልክቶች	ስያሜ	ህክምና
▶ በጣም የገረጣ መዳፍ	ከዐድ የደም ግነስ Severe anaemia	▶ ለሀጥሩ ራራራል በጣም እስራሊ እንደሆነ ተገኝቶባቸውን ምክራ ▶ ሀጥሱን ለጭንጭት ወደ ሆስፒታል ላኪው
▶ በመጠኑ የገረጣ መዳፍ	የደም ግነስ Anaemia	▶ ለሀጥሩ ራራራል በጣም እስራሊ እንደሆነ ተገኝቶባቸውን ምክራ ▶ ሀጥሱን ለጭንጭት ወደ ሆስፒታል ላኪው
▶ ያልገረጣ መዳፍ	የደም ግነስ የሌለው No anaemia	▶ ሕጥሱ ዕድሜው ከሁለት ዓመት በታች ከሆነ የአመጋገብ (ሁኔታውን) በመመርመር በአመጋገብ ምክር ቻርት ውስጥ ባለው መመሪያ መሠረት እንድትመግቡ ለእናት ምክራ - የአመጋገብ ችግር ካለው ቤቷቸው ቀን እንዲመሰክሩ ትጠራው - ተጠርቶን ሳትጠብቁ ለጭንጭት የምትመለከው ምን ስታይ እንደሆነ እናትን ምክራ