Challenges and opportunities of integration of community-based Nutrition services in Punjab, Pakistan

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Abstract

The government of Punjab provides nutrition services through primary, secondary, and tertiary health care facilities across Punjab. Sill lot of gaps exists, that reduce the services delivery and timely management of cases, which results in a high rate of nutrition maladies. To access this, a rapid assessment of nutrition services centers was conducted, which gauged whether these facilities are equipped with standard operating procedures, from identification, treatment and follow-up of the patient to service delivery. A rapid assessment tool was developed to measure the functionality of these service centers. The data analysis for the Outpatient Therapeutic Centers (OTP) showed that out of the total number of health facilities samples, 73 percent of the centers were fully functional, 24 percent were found to be semi-functional at the time of data collection, largely due to non-availability of equipment and supplies, while 3 percent of the centers were found to be non-functional. Of the 20 Stabilization Centers (SCs) surveyed, one was found to be only semi-functional due to the newly recruited staff, not having received the relevant training details mention in the Punjab Nutrition Plan. The SC also did not have available supplies of therapeutic food required to cure malnourished children. The other 19 SCs were reported as fully functional, but it was found that there was weak coordination between some of the SCs and the Provincial Program Implementation Unit of the program, as they were not sharing their monthly report using the standard reporting format. In order to make nutrition services more functional and effective, proper planning, timely availability of medicine, record keeping and follow-up are essential components to maintain the integrity of the program. There is an enabling environment for CMAM intervention in Punjab although health system strengthening is needed considering the barriers that have been identified. Training of staff related to health, government community workers, and ensuring uninterrupted supply of medicines and logistics to the functional facilities should be the immediate priorities. The availability of ready-to-use therapeutic food (RUTF) is a critical component of CMAM and the government should promote in-country production of RUTF for effective integration of CMAM into the health system in Pakistan, especially Punjab.

Keywords: Stabilization Centres(SCs), Out-patient Therapeutic Centres(OTPs), Malnutrition, community-based nutrition services, public health, challenges, opportunities.

Introduction

Malnutrition remains a significant problem in Pakistan, with approximately 40% of children under the age of five suffering from stunted growth (National Nutrition Survey, 2011). In developing countries, malnutrition remains a significant public health concern, contributing to more than 50% of deaths among 10-11 million children under 5 years old, which is preventable (Black et al., 2003; Caulfield et al., 2002; Rice et al., 2000; Pelletier and Frongillo, 2003). Globally, 165 million children are stunted, and 3.1 million deaths in children under 5 years are attributed to under nutrition (Bhutta et al., 2013). UNICEF (2013) estimates that 20 million children under 5 years old globally suffer from Severe Acute Malnutrition (SAM), with 1 million children affected in Pakistan alone, whereas every fourth child is SAM. The high burden of disease, coupled with frequent economic uncertainties and natural disasters, has led to an increase in the number of patients. According to the Flood Affected Nutrition Survey (FANS, 2010) conducted by UNICEF (2011), the prevalence of SAM among all children under 5 years old in flood-affected districts in south Punjab was 3.5%, with 20% of the district's population affected. Despite being Pakistan's primary food-producing region and the most prosperous province, malnutrition rates are alarmingly high, as confirmed by the National Nutrition Survey (NNS, 2011). In developing countries, where SAM is common, limited availability of inpatient capacity undermines treatment, and case fatality rates are 20-30%, with coverage of less than 10%.

The Community-Based Management of Acute Malnutrition (CMAM) strategy empowers community health workers to detect and initiate treatment for children with acute malnutrition before they become critically ill. The majority of severely malnourished children receive treatment at home from their caregivers using Ready-to-Use Therapeutic Foods (RUTF) and routine medical care, while those with medical complications or lack of appetite are referred to in-patient facilities for more intensive treatment. The CMAM program aims to reduce malnutrition rates and improve public health and food security in a sustainable manner.
Figure 1 illustrates the role of the therapeutic services provided by OTPs and SCs in the structure of the Punjab Nutrition Program. Many families could not access the CMAM program, owing to multiple socio-cultural and logistical reasons [Guerrero et al., 2009; Rogers et al.,2013]. The integration of community-based nutrition services into the healthcare system has been challenging, and there is a need to examine the opportunities and challenges associated with them.

Methodology

This study employed a qualitative research approach to examine the challenges and opportunities of integrating community-based nutrition services in Punjab, Pakistan. Data were collected from key stakeholders, including healthcare providers, community members, and policymakers.

Study design

This is a descriptive study of data on coverage and barriers. The rapid assessment aimed to collect information on the coverage, challenges, and opportunities for managing malnutrition in Punjab. The study was conducted in October and November 2014 and included all 20 SCs and a 15% sample of OTP sites in 16 priority districts. The districts were selected based on their reported rates of wasting and stunting. Table 1 provides a list of the functional SCs and OTPs in each district. The data was collected by trained interviewers and analyzed using statistical software. The findings of the assessment were used to identify gaps in the program and to develop strategies to improve its effectiveness.

The assessment was conducted using predefined criteria for both OTPs and SCs. OTPs were evaluated based on three parameters, while SCs were evaluated based on four parameters. All these parameters were used to assess the overall functionality of the OTPs and SCs, following guidelines from Sphere (2004), Myatt et al. (2005), and WHO (2006).

The data was collected using a prescribed format and was recorded for each facility. Throughout the study period, the collected data was kept safe. After data collection, the information was organized on an Excel sheet and tables and graphs were created to display the results obtained.

Results and discussion

The findings of this study revealed several challenges and opportunities associated with the integration of community-based nutrition services in Punjab. One of the major challenges identified was a lack of awareness and understanding of the importance of nutrition. Many community members were found to have limited knowledge about the importance of nutrition, and there was a general lack of awareness about the role of community-based nutrition services

in improving nutrition outcomes. The findings of this study revealed that while community-based nutrition services have the potential to improve access to and utilization of nutrition services, there are significant challenges that must be addressed, including lack of awareness and understanding of the importance of nutrition, inadequate funding and resources, and cultural barriers. The study concludes that effective integration of community-based nutrition services in Punjab will require a comprehensive approach that addresses these challenges and leverages the opportunities presented by community-based models of care.

Despite these challenges, the study identified several opportunities for improving the integration of community-based nutrition services in Punjab. For example, there was a strong sense of community ownership and engagement, with many community members expressing a desire to be involved in the provision of nutrition services. There was also a willingness among healthcare providers to collaborate with community health workers and to incorporate community-based nutrition services into existing healthcare structures.

Outpatient Therapeutic Centers (OTP) showed that 73% of the sampled health facilities were fully functional, 24% were semi-functional due to the lack of equipment and supplies, while 3% were non-functional. Table 2 provides a summary of the analysis featuring the composite criteria. Among the 20 Stabilization Centers (SCs) surveyed, one was only semi-functional due to the lack of relevant training for newly recruited staff and inadequate supplies of therapeutic food. The other 19 SCs were reported as fully functional, but some showed weak coordination with the Provincial Program implementation unit of the program, as they were not sharing their monthly reports using the standard format. To ensure the effectiveness of nutrition services, proper planning, and timely availability of medicine, record keeping, and follow-up are essential components that need to be maintained for the program to function properly.The equipment at two facilities in district Rajan Pur and one in R.Y.Khan was reported to be non-functional.Thermometers were the most commonly missing equipment, with 10 facilities working without them in various districts. Treatment protocols for SAM children were available and displayed in 61% of health facilities, and stocks of RUTF were available in the majority of OTP sites (94%). The standard monthly reporting register of Punjab nutrition program provided by the program was found to be available and was being used at 31 OTPs. Using standard reporting registers helps ensure consistency and accuracy in data collection and reporting across all OTPs.

Here's a summary of the information on Stabilization Centers:

- There were 20 Stabilization Centers (SCs) supported by the IRMNCH and Nutrition program, UNICEF, and WHO.
- Ten SCs were supported by the IRMNCH and Nutrition program, while UNICEF and WHO supported three SCs each.
- UNICEF and WHO withdrew their support for human resources in Dec. 2015, and the hospitals are now providing SC services through the internal organization of existing staff.
- The assessment findings for SCs show that only one SC was assessed to be semi-functional, while all others were functional.
- Staff at the semi-functional SC had newly recruited staff that had yet to receive their training, and stocks of therapeutic food were not available.
- All facility in-charges were well informed about the presence of the SC at their health facility.
- About 90% of the SC nurses were present at the time of verification visit and were not found at DHQ Bhakkar (District Bhakkar) and THQ Kot Addu (District Muzaffargarh).
- Training had not been arranged for newly recruited staff nurses at Layyah, Bhakkar, and Mianwali districts.
- Some SCs were not sharing their monthly report with the provincial office of IRMNCH using the standard reporting format.

Conclusions

In conclusion, the Community-based Management of Acute Malnutrition (CMAM) program has shown to be highly effective in delivering preventive care to communities. Compared to inpatient-only programs, CMAM has five times higher coverage and meets international standards for minimum performance indicators. The program has been recognized by the United Nations, health departments, and NGOs as a top practice in the preventive side of public health. However, there is room for improvement in areas such as uniformity in staff notification, staff training, equipment and supply procurement, and standardization of treatment protocols and reporting and recording stationery. Addressing these issues will be essential in ensuring the continued effectiveness and success of the CMAM program.

Recommendations to improve coverage against main barriers identified

- Improve data management and monitoring for monitoring system of referrals SAM complicated cases
- Improve RUTF stock management
- In order to bring uniformity staff notification from Executive District Officer (Health) for the OTP & SC centers should be issued in those districts which have not already done so far, to make program more effective
- New staff deputed should undergo training by the district & provincial administration to equip all the health care provider basic skills
- All the missing equipment and supplies should be procured and provided at the centers, which are the key components for proper service delivery
- Ensure the availability and display of standard treatment protocols for all centers, and supply standard reporting and recording stationery to all centers
- Stimulate sensitization activities for awareness of malnutrition on community basis
- To confirm that barriers are continuously monitored to ensure timely removal and increased coverage.

Acknowledgments

The input, contribution, and support of all those who provided generous data for this study are acknowledged here.

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Annex: Tables and figures

Table 1: List of distribution of OTPs and SCs in Punjab

Sr. No	Name of District	No of OTP s	15% of OTP sites	No of SCs	Total No. of Sites in one district
1	D.G.Khan	18	3	1	4
2	RajanPur	35	5	1	6
3	Layyah	24	4	1	5
4	Muzaffargarh	28	4	3	7
5	Bhakar	17	3	1	4
6	Mianwali	17	3	1	4
7	R.Y.Khan	11	2	1	3
8	Bahawalpur	22	3	1	4
9	Bahawal nagar	29	4	0	4
10	Narowal	16	2	0	2
11	Lahore	0	0	3	3
12	Multan	0	0	2	2
13	Gujrat	0	0	1	1
14	Gujranwala	0	0	1	1
15	Sargodha	0	0	1	1
16	Faisalabad	0	0	1	1
Total		**217**	**33**	**19**	**52**

Table 2: Status of OTP centers

No.	Districts	Health Facility	Equipment and supplies	Records	Status
1	D.G Khan	RHC Kala	F	F	F
2	D.G Khan	BHU Aali Wala	SF	F	F
3	D.G Khan	BHU Gadai	F	F	F
4	Layyah	BHU Jharkil	SF	F	F
5	Layyah	BHU Shahpur	F	F	F
6	Layyah	BHU Sami Pur Baghal	F	F	F
7	Layyah	THQ Karor	NF	F	SF
8	M.Garh	BHU Langar Saraye, Muradabad	F	F	F
9	M.Garh	BHU Sheikh Umar	F	F	F

10	M.Garh	BHU Mehmood Kot	F	F	F
11	M.Garh	BHU Jaggat Pur	F	F	F
12	Bhakkar	RHC Behal	NF	SF	SF
13	Bhakkar	BHU Hassan Shah	NF	SF	SF
14	Bhakkar	BHU Sial	SF	SF	SF
15	Mianwali	BHU Dhoke Ayub	NF	NF	NF
16	Mianwali	BHU Thathi	NF	F	SF
17	Mianwali	BHU Maseet Wala	F	NF	SF
18	Narowal	BHU Darman	SF	F	F
19	Narowal	BHU Khan Khasa	F	F	F
20	Rajanpur	BHU Kotla Dewan	SF	F	F
21	Rajanpur	BHU Mehray Wala	F	F	F
22	Rajanpur	BHU Wang	SF	F	F
23	Rajanpur	RHC Fazil Pur	F	F	F
24	Rajanpur	BHU Fateh Pur	SF	NF	SF
25	Bahawalnagar	BHU 227/9-R	SF	F	F
26	Bahawalnagar	BHU 10/F.W	SF	F	F
27	Bahawalnagar	BHU Lalika	SF	F	F
28	Bahawalnagar	BHU 165/7R	NF	F	F
29	Bahawalpur	BHU Sayed Imam Shah	F	F	F
30	Bahawalpur	BHU Kotla Moosa Khan	SF	F	F
31	Bahawalpur	BHU 106/DB	F	F	F
32	R.Y Khan	RHC Jamal Din Wali	NF	F	SF
33	R.Y Khan	BHU Zamin Shah	SF	F	F

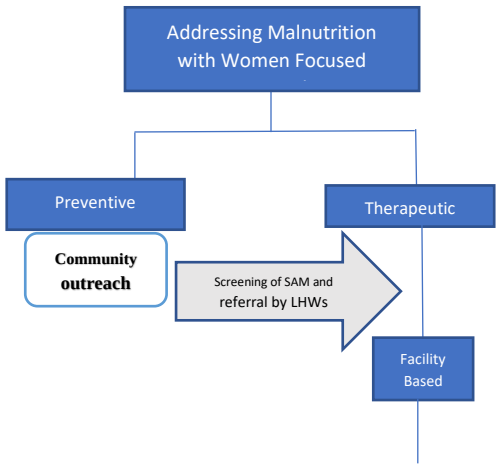
* F Functional
SF Semi Functional
NF Non Functiona

Table 3: Parameter wise summary for all SCs

Sr. No.	**Districts**	**Health Facility**	**Staffing**	**Space and Water boiling facility**	**Equip /Supplies**	**Records**	**Status**
1	D.G Khan	DHQ Hospital	F	F	SF	F	F
2	Layyah	DHQ Hospital	SF	F	NF	F	F
3	M.Garh	THQ Ali Pur	F	F	F	F	F

4	M.Garh	DHQ Hospital	F	F	F	F	F
5	M.Garh	THQ Kot Addu	F	F	SF	F	F
6	Bhakkar	DHQ Hospital	SF	F	SF	F	F
7	Mianwali	DHQ Hospital	SF	NF	SF	NF	SF
8	Multan	Children Hospital	F	F	F	SF	F
9	Multan	Nishter Hospital	F	F	F	SF	F
10	Gujran wala	DHQ Hospital	F	F	F	F	F
11	Lahore	MAO Hospital	F	F	F	SF	F
12	Lahore	Ganga ram Hospital	F	F	F	SF	F
13	Lahore	Children Hospital	F	F	F	F	F
14	R.Y Khan	DHQ Hospital	F	F	SF	F	F
15	Bahawal pur	DHQ Hospital	F	F	SF	F	F
16	Bahawal nagar	DHQ Hospital	F	F	NF	F	F
17	Rajanpur	DHQ Hospital	F	F	F	F	F
18	Faisalabad	Allied Hospital	F	F	F	F	F
19	Gujrat	DHQ Hospital	F	F	F	F	F
20	Sargodha	DHQ Hospital	F	F	F	F	F

Figure 1: Organization of the Nutritional Services in Punjab



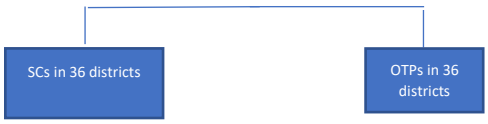


Figure 2 : Percentage of OTP notified staff

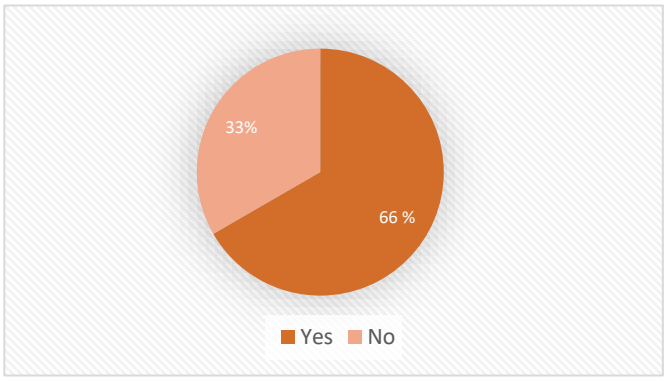


Figure 3: Percentage of nominated trained staff

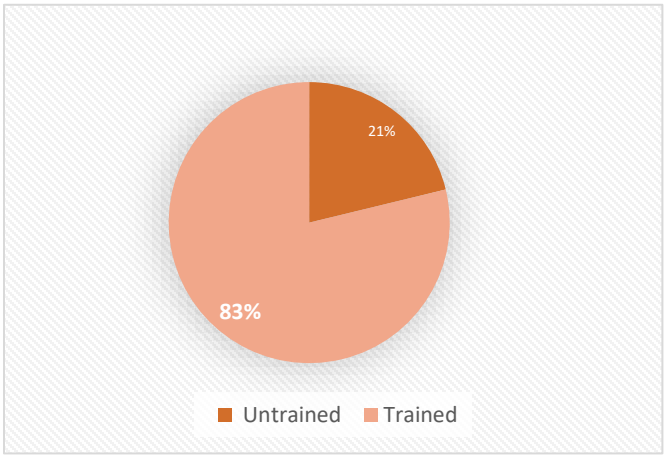


Figure 4: Equipment availability

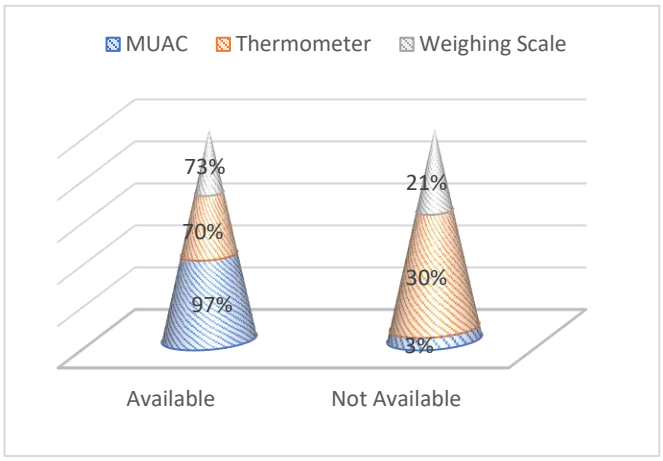


Figure 5: Training status of stabilization centre staff

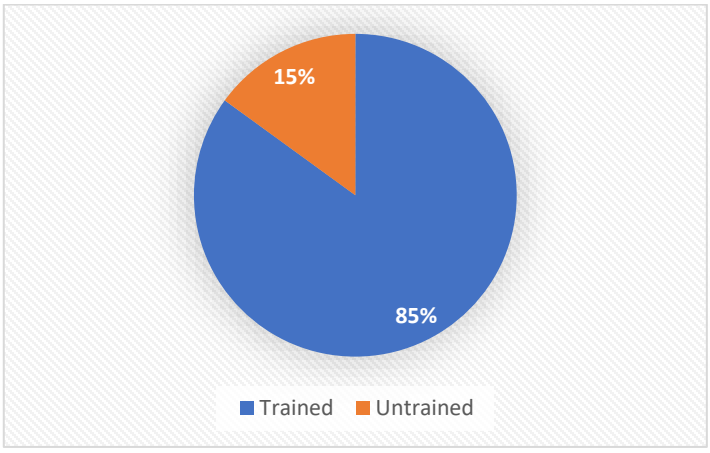


Figure 6: Equipment and supplies