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Lessons Learned from Implementing Community-based Therapeutic Care in Pastoralist Communities in Afar Region, Ethiopia.

1. Introduction.

1.1 Project location: Afar Region, Zone 4.

The Government of Ethiopia has developed a comprehensive ‘Early Warning System’ that includes the annual collection and assimilation of information from all regions of the country to predict areas vulnerable to acute food insecurity, so-called ‘hot spot areas’ in the year ahead. This is a joint assessment with international partners and adds to information collected bi-annually on the performance of the two main harvests throughout the country. This information is shared with national and international partners and donor agencies. It is used to design effective emergency responses to fast onset and chronic disasters in order to mitigate loss of life and prevent extensive loss of livelihood for the affected populations. In January 2006, in response to regional reports on above average migration of people and livestock from the area due to acute drought, this joint government appeal declared several areas of Afar Region as ‘emergency hot spots’ requiring immediate humanitarian assistance to mitigate loss of life for human and livestock.

Afar Regional State is an extremely dry region in the north east of Ethiopia at the head of the Rift Valley. The region spreads from hilly escarpments at the foot of the Ethiopian highlands in the west to desert and volcanic lava flows in the east. The altitude ranges from 1500 metres in the west to over 100 meters below sea level in the east (Danakil depression), with an area of about 270,000 km² (Afar Regional Health Bureau, (RHB), 2006). Temperatures reach up to 50 °C. Administratively, Afar Region is divided into five zones, which are further subdivided into 29 districts called ‘woredas’. It is one of the four major pastoral regions in Ethiopia with a population estimated to be 1.6 million (Ethiopian Demographic and Health Survey (DHS) 2005) of which 90% are pastoralists and 10% agro-pastoralists.

1 Concern Ethiopia, Addis Ababa

2 This annual ‘Joint Government and Humanitarian Partners Appeal’ is headed by the Federal Disaster Prevention and Preparedness Agency in Addis Ababa, Ethiopia and supported by UN agencies, international donor agencies and international NGOs. It is the basis for decision-making and predicting the number of potential beneficiaries, and quantity of food aid that will be required for the year ahead.
In Afar, livestock breeding is the main economical activity. Commonly kept livestock include camels, cattle, sheep, goats and donkeys. Cattle and camel milk is an important component of the Afar diet, and can be vitally important for children. Sheep and goats are mainly kept for meat and cash income. Few donkeys are kept for transportation purposes. Afar people follow a transhumant form of pastoralism that involves seasonal migration in search of pasture and water. Clans play a fundamental decision-making role in Afar society. Land ownership and grazing rights are based on traditional clan laws. Pastoralists from the same clan and other agro-ecological areas are not considered foreigners. In general, resources are shared without conflict. The society is strictly patriarchal and women have a limited role in decision-making at both family and community level. Moreover, women’s movement is in general very restricted. Most women are only allowed by husbands to move within the woreda to seek pasture and water for small livestock. This affects women’s participation in community programmes and their access to services in particular, health and education services.

Water shortage is a critical problem in the region. Fresh groundwater availability is poor and the general water supply coverage is estimated at only 29%. In 2006, due to a succession of droughts, the shortage of water was acute causing above normal migration and loss of livestock in several parts of Afar. Because of the dependency on livestock and their produce for survival, fears grew of acute food insecurity inflicting suffering and potential loss of life especially among the young and women. Zone 4 was especially affected. This zone presents some of the most challenging terrains of the region. This contributes to the low uptake of health services delivered by the Ministry of Health (MOH). In particular routine immunisation coverage is among the lowest in the region and in the country. The government national child survival strategy delivered through the Enhanced Outreach Strategy (EOS) does not operate in Zone 4. Therefore the usual six-monthly immunisation campaigns for measles and vitamin A distribution do not take place. Additionally, the targeted supplementary feeding component for moderate and severely malnourished children under-five years fails to exist. Furthermore, the national food and livelihood support initiative

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1 Enhanced Outreach Strategy – is the National Strategy by the federal MOH and UNICEF for Child Survival interventions in Ethiopia. The main activities include bi-annual measles vaccination and Vitamin A distribution, de-worming, screening for acute malnutrition, mobilization for National Immunization Days and health and nutrition education.
delivered through the Productive Safety Net Programme (PSNP) has so far not included large parts of Afar, including Zone 4, in its list of beneficiaries. No international NGOs work in the area. The only form of food aid support is delivered every six months in the form of wheat rations (10 kg/capita), managed and distributed using a clan system than does not necessarily target the poorest nor those affected by malnutrition.

1.2. Justification for an Emergency Nutrition Intervention.

The Regional Health Bureau (RHB) identified Zone 4 in particular in need of immediate support. In February 2006, Concern was requested to implement an emergency nutrition response in two of the worst affected woredas in Zone 4, namely Yallo and Teru Woredas to prevent a deteriorating nutritional status. In March 2006, Concern conducted a baseline nutrition survey that found the prevalence global acute malnutrition to be “serious” in the presence of aggravating factors such as low vaccination coverage, lack of clean water and sanitary latrines as well as an inadequate health service delivery system. Concern predicted further nutritional deterioration and possible deaths among young children.

Table 1. Selected findings from a base line nutrition survey (Concern, March 2006)

| Global acute malnutrition (GAM) as weight-for-height <-2 Z-scores (95% C.I.) | 11.1% (8.4 -1.4) |
| Severe acute malnutrition (SAM) as weight-for-height <-3 Z scores (95% C.I.) | 1.1% (0.4 - 2.6) |
| Crude mortality rate (death/10.000/day) | 0.5 deaths/10,000/day |
| Under five mortality rate (death/10.000/day) | 1.54 deaths/10,000/day |
| Immunisation coverage against tuberculosis (BCG) | 0.50% |
| Measles vaccination uptake (by mothers recall) | 5.5%. |

Because of Concern’s expertise and commitment to community-based therapeutic care (CTC) programming as an effective approach to address severe acute malnutrition (SAM), it was decided to work with the MOH at woreda level (WMoH),
to deliver CTC services through extensive outreach services targeting the most vulnerable - young children aged between 6 and 59 months.

2. Objectives

- To document lessons learned using a CTC approach to treat and manage severe acute malnutrition in young children in pastoralist communities in Afar Region, Ethiopia.
- To recommend alternate operational modalities to improve the effectiveness of CTC in pastoralist areas where the health infrastructure is severely compromised.

3. The Approach.

Community-based therapeutic care (CTC) is a highly successful approach for treating and rehabilitating severely acutely malnourished children largely at home. The approach has recently been endorsed by WHO and UNICEF for emergency settings. There are four components to the approach: 1) community mobilisation, 2) outpatient therapeutic programme (OTP), 3) stabilisation centre (SC), and 4) supplementary feeding programme (SFP). The relationship between the components is described in Figure 1. The CTC approach decentralises services by focusing on outreach service delivery in the OTP component. Up to 95% of SAM cases, those with an appetite and no underlying medical complications are treated as outpatients at one of the many OTP sites, usually on a weekly or bi-weekly basis. This greatly reduces the time spent by carers and costs associated with attending traditional in-patient therapeutic feeding programmes. Children attending bi-weekly OTP operated at MOH facilities receive a medical check up, the required essential drugs and a ration of ‘ready-to-use therapeutic food’ (RUTF)\(^4\) to be consumed at home daily until the next scheduled visit. The RUTF used in this programme was a peanut-based paste containing minerals, vitamins and energy to facilitate recovery and growth in children suffering from SAM. Those children with SAM and no appetite or with medical complications, including severe bilateral pitting oedema, are referred to a stabilisation centre (SC) where they receive in-patient treatment usually for a less than a week before being

\(^4\) The RUTF ration provides 200kcal/kg bodyweight/day, 10% of which are protein and 59% fat; the vitamin and mineral composition per kcal is similar to the therapeutic F-100 milk.
readmitted to the OTP when stabilised. Children will remain in the OTP until recovery but no longer than three months. Upon discharge, they usually are admitted into the SFP, where dry food rations are provided to enable the child to continue full recovery.

Central to the CTC approach is community mobilisation to achieve early detection and referral of SAM cases in the community as well as achieving high coverage of >70% of the community. This approach is described in detail by Valid International (2006) and the Government of Ethiopia has endorsed it.

**Figure 1.** Relationship between the four components of the Community-based Therapeutic Care approach for the treatment of Severe Acute Malnutrition (adopted from Valid International 2006)

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**4. Challenges for CTC delivery in pastoralist community**

During much of project period there was high movement of the population due to prolonged drought. People were forced to move with their cattle to other areas within and outside the region in search of water and pasture for their livestock. This mobility reduced carers’ compliance with CTC protocols as attendance was at times erratic and drop out rates were high. Vehicle access to several areas was not feasible. This slowed down food distribution and prevented to establish more food distribution points which could have improved coverage. The weak MoH infrastructure combined with the lack of health professionals rendered full ownership and management of CTC services
delivered by the WMOH unachievable. Rather Concern managed the delivery of CTC services throughout the project implementation. In addition, because Afari women are responsible for home-based affairs and men play all community roles, it proved extremely difficult to fully engage women in these projects. Specific strategies to involve women were developed to overcome this challenge.

5. Adaptation made for CTC delivery in pastoralist community

In light of the above mentioned challenges and as this was the first time CTC was implemented in this area, community elders and health professionals were invited to select the most suitable sites for OTP services and SFP distribution sites in both woredas. Sites included water collection sites and food distribution sites as well as any functioning static health facility. This was later considered an important step in the planning process and an important factor contributing to success of CTC in this area. Moreover, to improve programme coverage, as many OTP sites as possible were located throughout the communities and services were delivered by site rotation (so called ‘mobile’ OTP). Service delivery modalities also had to be adapted to reduce the number of children dropping out of the programme without being cured and improve compliance to the protocol. In some areas OTPs and SFPs operated on a monthly basis, which was not ideal from a nutritional point of view but reduced absenteeism in families on the move for better pasture and water who would not be able to attend bi-weekly OTP check-ups.

Children suffering complications requiring specialised medical care and in-patient support were referred to a SC, which was hospital or health centre-based. Because of the lack of hospitals in this zone, SC referrals were very difficult, requiring the mother to move to another region, on average a distance of some 100km.

In this pastoralist CTC intervention, considerable effort went into identifying and training appropriate community volunteers to identify SAM in the community, refer cases for treatment and promote behaviour change at home level. Community volunteers used simple tapes to measure mid-upper arm circumference (MUAC) to identify malnutrition presented as ‘wasting’ (marasmus) and were trained to identify malnutrition presented with life threatening ‘oedema’ (kwashiorkor). It was difficult to engage women as community volunteers given the strong patriarchal society of the
Afar. By approaching clan elders and community focal people Concern managed to engage women. By the end, some 28 of the community volunteers were females involved in mobilisation and health education activities in the community.

An anthropological study was conducted during the project implementation period to support the project staff to identify influential decision-makers in the community. The findings of the study contributed to strengthen the mobilisation strategy which had proved difficult to initiate at the set up phase.

6. Summary of Intervention Results.
Concern monitored the process and outcomes of the projects, to ensure that quality services were maintained and outcomes were above internationally accepted indicators. Baseline and end-line surveys were conducted with the WMOH and community leaders and managed by Concern. During the 6-month intervention, 133 children were treated in OTPs (results overleaf). In addition, 17,058 children under-five years, pregnant and lactating women received blanket and target supplementary feeding support.

Table 2. OTP performance indicators for Yallo and Teru woredas, Zone 4, Afar Region.

<table>
<thead>
<tr>
<th>Performance indicators</th>
<th>OTP result indicators</th>
<th>Sphere performance indicators (inpatient care)</th>
<th>Valid International performance indicators (CTC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cure rate</td>
<td>79%</td>
<td>&gt;75%</td>
<td>As Sphere</td>
</tr>
<tr>
<td>Default rate</td>
<td>13%</td>
<td>&lt;15%</td>
<td>As Sphere</td>
</tr>
<tr>
<td>Death rate</td>
<td>4%</td>
<td>&lt;10%</td>
<td>As Sphere</td>
</tr>
<tr>
<td>Average weight gain (g/kg/day)</td>
<td>3.5</td>
<td>&gt;8</td>
<td>&gt;4</td>
</tr>
<tr>
<td>Average length of stay (days)</td>
<td>92</td>
<td>30-40</td>
<td>&lt;60</td>
</tr>
</tbody>
</table>

The average length of stay far exceeded the acceptable levels suggested by Valid International and presented above. The reason for this was multifactoral. Firstly,

\footnote{Previously the only internationally accepted indicators for SAM management were presented by the Sphere Guidelines (2004) for in-patient care in an emergency context. In 2006, Valid International (the designers of the CTC model) presented guidelines which offered performance indicators more in line with outpatient rather than in-patient care. Concern used these indicators to measure performance and programme quality.}
reduce absenteeism monthly OTP services rather than bi-weekly were delivered. This is known to reduce the rate of recovery as opportunistic infections that occur during the month or even non-compliance with the protocol may not be spotted for several weeks. This may hamper the child’s recovery and ultimate weight gain. Moreover, giving a monthly supply of therapeutic food in an area where food insecurity is acute, milk yield is low and where food sharing among families is a cultural norm, reduces the likelihood that the intended prescribed dose of RUTF is ever fully consumed by the child with SAM. In addition, because of difficult terrain, mothers had to travel considerable distances to reach the nearest available OTP sites. Mothers are not habituated with using health services in these areas so it was difficult to impress on them the importance of attending the OTP regularly as requested. It is suggested that these factors compromised the quality of outcomes especially the length of stay and average weight gain achieved.

The training included MOH staff and 639 community volunteers (28 women) who support all OTP sites through active case finding and referral and delivery of health and nutrition promotion messages in the community. The health-seeking behaviour of families of malnourished children showed improvement. Malnourished children, who were previously considered as cursed and were hidden at home, were taken to OTP sites for care. In November 2006, an end-line nutrition survey was conducted to assess the impact of the intervention. Survey results indicated a reduction in prevalence of severe acute malnutrition and mortality rate in the target group as indicated in Table 3 below.

**Table 3.** Results of nutrition surveys in Teru and Yallo woredas in March and November 2006

<table>
<thead>
<tr>
<th>Woreda (district)</th>
<th>March 06</th>
<th>Nov 06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe acute malnutrition (95% CI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teru</td>
<td>1.1 (0.4 - 2.6)</td>
<td>0.6 (0.2 - 1.1)</td>
</tr>
<tr>
<td>Yallo</td>
<td>1.1 (0.4 - 2.6)</td>
<td>0.7 (0.2 - 1.2)</td>
</tr>
<tr>
<td>Under-5 mortality rate (persons/ day)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teru</td>
<td>1.54</td>
<td>1.49</td>
</tr>
<tr>
<td>Yallo</td>
<td>1.54</td>
<td>1.22</td>
</tr>
</tbody>
</table>

Achieving an acceptable level of SAM below 1% in this area can be attributed to a successful CTC intervention. The chronic and acute food insecurity that prevails,
together with the poor levels of hygiene, sanitation and safe water access makes it difficult to impact significantly on the levels of moderate malnutrition presented as a global acute malnutrition rate (GAM) of 11.3% (95% C.I: 9.0-13.5). This was more or less the same as the baseline survey result reported 8 months previously at 11.1% (95% C.I: 8.4 -14.4) for Yallo woreda. In Teru woreda a GAM of 9.3% (95% C.I: 6.8-11.9) was reported.

During a period of three months, 2,120 children under one year of age received routine vaccination against tuberculosis (BCG), and 2,292 against diphtheria, pertussis, tetanus (DPT). Vaccination against measles was received by 4,266 children aged 9 and 59 months. Vaccination against tetanus toxoid was received by 10,992 pregnant women and women of child bearing age. It is uncommon for Afari women to avail of these services and so this effort may have promoted uptake by other mothers in the community as a ‘knock on’ effect for the continued protection of children and mothers in future.

7. Lessons learned.

A learning review was conducted prior to project closure to extract lessons learned which were specific to this context in order to maximise learning and improve future responses in pastoralist communities. The review team consisted of Concern’s technical health and nutrition staff, project teams and community mobilisers. This critique took place over a period of two days and the team worked together to verbally autopsy the process and outcomes of both projects. It was important to document what was tried and did not work as well as what worked during this intensive review. Interviews were also conducted with community leaders and mothers to gather their feedback on the approach. Key findings are presented below.

7.1. Integration is key to CTC success in a pastoralist community

To successfully treat and manage severe acute malnutrition in a pastoralist area where the health infrastructure is severely compromised, an emergency nutrition intervention such as CTC should also incorporate interventions to improve routine, immunisation uptake for all children under five years and improve access to safe water. Where

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6 Global acute malnutrition (GAM) refers to the combined prevalence of severe + moderate acute malnutrition.
needed, interventions to support the livestock sector, in particular the provision of veterinary services should be included.

7.2. Mobile rather than static OTP service delivery
OTP service delivery is more effective in reaching beneficiaries when delivered through mobile units that provide services on several days a week at multiple sites in the community rather than at static health posts on a bi-weekly basis only. This gives an opportunity for caretakers to stay in contact with the project. The selection of OTP sites should involve community leaders to improve uptake and access by mothers. Mothers need encouragement to attend the OTP at least bi-weekly because they are primary care givers for children. However, where this is not feasible, monthly OTP services may be considered. Although this flexible system should help reduce absenteeism and drop out, the recovery rates and overall CTC performance may be compromised.

7.3. Cultural sensitivity is the key to effective community mobilisation
Much of the success of CTC relies on effective mobilisation and acceptance so that children can be identified early and mothers agree to take the child to the OTP for services. It is worth taking time to work out how best this mobilisation can be managed – what messages, how messages are delivered, who is involved at house to house level etc. Conducting an anthropological assessment prior to project implementation is helpful to learn about the intricate roles played by community structures, the clan system and the role of religious leaders in decision-making, and the communication systems that exist in each society. This is to develop a more effective community mobilisation strategy and enhance participation and programme success. In Afar, using the indigenous communication system known locally as ‘Dagu’ and community structures effectively mobilised the community and provided a forum to solve problems that arose when working in this area.

7.4. Modify the modalities of CTC service delivery in pastoralist communities
A CTC programme delivered in highland areas of Ethiopia where the health infrastructure is strong and a network of outlying static health facilities served by health extension workers cannot be directly replicated in the lowland pastoralist areas. The programme needs to address issues such as the mobility of carers, the availability
and accessibility of health facilities and health workers, the health seeking habits of communities and the availability of mothers to attend services far from their homes. Distributions points for SFP and mobile OTP services can be selected accordingly to suit the pastoralist nature of communities. Operating SFP in collaboration with OTP may entice mothers to come for services and reduce sharing of therapeutic foods for the affected child. Uptake of other outreach health services including routine immunisation can also be promoted on OTP/SFP delivery days. In the recommendations listed below, we outline aspects to be revised in the current CTC guidelines that may improve the effectiveness of emergency nutrition response in pastoralist areas.

7.5. The gender impact on health seeking behaviour must be addressed
This is a difficult yet necessary issue to address when working in communities where the decision-making role of mothers is minimal when it comes to child health as well as other family matters. Clan leaders were approached to suggest ways to engage women in community mobilisation and health promotion activities. Ultimately it is better to have an even gender balance when conducting community-based activities to ensure that the principle carers (mothers) are reached more effectively. An agreement was reached for 28 mothers to be employed as outreach workers and community volunteers. It is believed that this improved the uptake of sensitive health messages related to breast feeding, immunisation uptake or family planning service utilisation amongst others. By employing a small group of women as outreach workers, Concern tried to bridge the gap between men and women in this regard. These women demonstrated how effective women can be working at community level. It was a small but important step forward and was commented on as such by village elders during the review meeting.

8. Conclusion.
This was the first experience for Concern to respond to an emergency in pastoralist areas in Ethiopia and it was by and large a successful operation. However, because of the severely compromised health infrastructure, a lack of qualified and experienced MoH staff, the hot climate and sometimes impassable terrain, project implementation in this area was very challenging. These challenges were addressed by carefully understanding the context and adjusting the project flexibly to the lifestyle of
pastoralists. The experience gained and documented from this emergency nutrition intervention is useful for other organisations that plan to implement CTC programmes to address severe acute malnutrition in pastoralist areas.

9. **Recommendations.**

9.1. The modalities of OTP and SFP delivery should be adjusted to best suit the lifestyle of the communities affected. Consider delivering OTP services on a bi-weekly or monthly basis by mobile teams that move to where the population is for example at nearby water collection points or food distribution sites as well as any available static health facilities.

9.2. Because of high food insecurity, inter- and intra-family food sharing is widely practiced within clans. Absenteeism and drop-out rates are higher due to difficult terrain and their pastoralist lifestyle. Therefore the expected average length of stay, the rate of weight gain and the default rate do not meet international standards outlined by Valid International in 2006. Revised benchmarks of achievement are called for.

9.3. The baseline assessment should include a comprehensive anthropological investigation to understand the existing communication systems, community structures and cultural norms that will impact on health service uptake, community participation and ultimately programme success.

9.4. Health services, in particular routine immunisation for children as well as services to improve water access and livestock health should be designed to compliment the CTC programme to enhance success and acceptability.

9.5. A separate health education strategy is required for SFP beneficiaries if men only, rather than women attend food collection days. More outreach workers may be employed to address this issue nearer to homes to ensure that mothers are reached to improve the potential behavioural change impact of the health education delivered.

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