Violent conflict almost always results in increased levels of malnutrition, especially among children. People are displaced from their homes, crops destroyed, farmland and tools abandoned and children often separated from their families, making it harder for them to access enough food. This can have devastating consequences, putting children at higher risk of death and threatening their development.

Conflicts also pose challenges in addressing malnutrition. Responses to conflict are often underfunded, government capacity and resources stretched, and transport and health infrastructure poor and inconsistent. Under these conditions, responding agencies face significant barriers in reaching the most vulnerable, in maintaining humanitarian access long enough to complete treatment for malnutrition and in sustaining the programme and its benefits.

This case study looks at how World Vision South Sudan’s nutrition team worked with the United Nations (UN) Nutrition Cluster to adapt its nutrition programming to overcome the contextual challenges and address the malnutrition needs of children and affected communities. It highlights some key observations and learnings from World Vision’s implementation of community-based management of acute malnutrition (CMAM) and the multi-sectoral Rapid Response Mechanism.

I. The context

Active hostilities and ongoing insecurity in South Sudan have caused widespread displacement; high rates of death, disease and injury; disrupted livelihoods; severe food insecurity and a major malnutrition crisis.

Even before the conflict began, the nutrition situation in South Sudan was chronically poor. Of 21 counties assessed during the 2013 lean season, 17 had global acute malnutrition (GAM) rates above the emergency threshold of 15 per cent.

Despite this assessment, the world’s leading food and agriculture agencies held a positive outlook for South Sudan’s overall food security situation. The number of people having adequate food had increased by more than 6 per cent from October 2012 to October 2013. In November 2013, experts predicted that food security would continue to improve in several years.

---

3 Ibid, 5.
5 Ibid.
counties due to favourable rainfall, increased harvests, improved cross-border trade and the stabilisation of grain prices.\textsuperscript{6}

Although pockets of food insecurity were predicted to continue, no one expected the catastrophic decline that has been seen in conflict-affected areas.\textsuperscript{7}

Yet between December 2013 and February 2015, the number of children suffering from severe acute malnutrition doubled to more than 229,000.\textsuperscript{8} In the worst-hit areas of Greater Upper Nile, Warrup and Northern Bahr el Ghazal, nearly one in three children under 5 are malnourished.\textsuperscript{9} The malnutrition situation is classified as critical (GAM between 15 and 29 per cent) or very critical (GAM above 30 per cent) in over half of the country.\textsuperscript{10}

Since the beginning of the conflict in December 2013, more than 1.5 million people have been displaced internally, including more than 800,000 children.\textsuperscript{11} People fleeing their homes are forced to abandon their fields and livestock. Many have sought refuge on UN peacekeeping bases or other informal settlements and can no longer grow crops or tend livestock. They now rely on emergency food assistance to survive. Those who have not been displaced by fighting have faced difficulties in sowing crops due to interruptions in trade and supply corridors, which have limited the availability of seed and other agricultural supplies. Without humanitarian

---

\textsuperscript{6} FEWSNET, Food Security Outlook for South Sudan for October 2013 to March 2014, (2013).
\textsuperscript{7} FEWSNET.
\textsuperscript{8} UNICEF, South Sudan on the edge of nutrition catastrophe if hostilities don't end now, (2015).
\textsuperscript{9} UNOCHA, South Sudan Humanitarian Bulletin, (29 May 2015).
\textsuperscript{10} UNOCHA South Sudan, 5.
\textsuperscript{11} UNICEF, South Sudan Situation Report, (23 April 2015).
intervention, a far greater number of people across Unity State, Jonglei and Upper Nile would be facing emergency levels of food insecurity.\textsuperscript{12}

This impact of deteriorating food security on nutrition levels is further compounded by lack of access to clean water, improved sanitation and basic health care, and by increased prevalence of disease. Feeding practices for infants and young children have also been affected by traumatic experiences.

The UN estimates that the lives of nearly a quarter of a million children are at significant risk as a result of these declining food and nutrition conditions.\textsuperscript{13}

The immediate and long-term consequences of this malnutrition crisis make addressing nutrition a clear priority for organisations like World Vision, and it is highlighted as one of four priority needs in the UN’s 2015 Humanitarian Response Plan for South Sudan.\textsuperscript{14}

### 2. World Vision’s response

World Vision affirms the right to receive and offer unimpeded humanitarian assistance as a fundamental humanitarian principle. In order to provide assistance to effected children and their families, World Vision acts in accordance with the humanitarian principles of neutrality, impartiality and independence in its programme delivery. The organisation works with children, families, communities and other partners in both Government- and Opposition-controlled areas to reduce vulnerabilities and enhance people’s ability to cope with and recover from the effects of malnutrition. World Vision’s response to the malnutrition crisis in South Sudan is multi-sectoral. Alongside targeted nutrition programmes, World Vision conducts critical complementary programmes: food distributions; agricultural initiatives to increase food production; and improved access to safe water, sanitation and basic health care to children under 5 and pregnant women.

World Vision partners with UN agencies, including World Food Programme (WFP), United Nations International Children’s Emergency Fund (UNICEF) and the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), and with other aid agencies to avoid duplication, provide platforms for consolidated fund appeals, share learnings and conduct quality assurances.

Within this framework World Vision uses the community-based management of acute malnutrition (CMAM) model to manage severe and moderate acute malnutrition. This model,

### Impact of malnutrition

Children suffering from severe acute malnutrition are nine times more likely to die in childhood than are healthy children.\textsuperscript{15} Malnourished infants who survive will be at high risk of chronic complications and limited brain development.

Development during childhood and youth is not a uniform process; critical periods exist where significant harm is likely to produce severe, often irreversible and intergenerational effects. These sensitive periods are windows of opportunity – as interventions in one generation can bring benefits to successive generations.\textsuperscript{16}

Malnutrition left untreated in young children can cause irreversible brain damage, prevent normal growth and increase the risk of developing chronic disease later in life. All these factors combined lead to less-productive adults.\textsuperscript{17}

\textsuperscript{12} IPC, Food Security and Nutrition Analysis, (May 2015).
\textsuperscript{13} UNICEF, Children face worsening nutrition crisis as South Sudan fighting intensifies, (27 May 2015).
\textsuperscript{14} UNOCHA South Sudan, 1.
used extensively in humanitarian emergency contexts, incorporates ready-to-use therapeutic foods (RUTF) and ready-to-use supplementary foods (RUSF) respectively among children and pregnant women.

To reduce the incidence of malnutrition, World Vision implements a blanket supplementary feeding programme for children aged 0–24 months and special infant and young child feeding practices in communities.

Despite the difficult operational context, World Vision continues to uphold the six core standards stipulated in the Sphere Handbook. Building trust with communities and partners on the ground through coordination, collaboration and performance transparency has been particularly important to ensuring operational space and continuation of programmes in areas affected by hostilities.

### Community-based management of acute malnutrition (CMAM)

CMAM is used extensively by World Vision and other organisations in development and emergency contexts where:

- levels of global acute malnutrition (GAM) are >10 per cent in the under-5 population in the community, or between 5 per cent and 10 per cent with ‘aggravating factors’.¹⁸
- the absolute numbers of severely malnourished children are high and it is beyond the capacity of the local health facility to manage on its own.¹⁹

The success of the CMAM approach to nutrition programming in insecure or conflict-affected contexts depends on a careful contextual analysis and appropriate adaptations of the model.

CMAM is based on four key principles:

1. Ensuring that the majority of children who require treatment for acute malnutrition are receiving care.
2. Identifying children with acute malnutrition early and beginning treatment before additional medical complication occurs.
3. Providing appropriate care, including simple and effective home-based treatment where possible.
4. Allowing children to remain in the project until they recover.

CMAM projects consist of four components:

1. **Community mobilisation** to build a relationship with community members, foster their participation and build their capacity for early detection of acute malnutrition, adequate referral and prevention – all essential to achieve good coverage.
2. **Supplementary feeding programme** (SFP), providing dry take-home rations and routine basic treatment for children with moderate acute malnutrition (MAM) without medical complications. (MAM is defined as a weight for height z-score (WFH) ≥ −3 and < −2 or a mid-upper-arm circumference (MUAC) ≥ 115 mm and < 125mm.)
The SFP seeks to prevent deterioration to severe acute malnutrition (SAM), reduce deaths by treating children before they are at high risk of dying and prevent declining maternal nutritional status. A family food ration helps prevent household sharing of the malnourished child’s ration. An SFP usually includes visibly pregnant and lactating mothers with infants less than six months who are affected by acute malnutrition.

3. **Out-patient therapeutic programme (OTP)**, providing RUTF and routine treatment, using simple medical protocols for children with SAM without medical complications. (Severe acute malnutrition is defined as a WFH < −3 or a MUAC < 115 mm. About 85 to 90 per cent of children with SAM are treated in OTP, with children attending out-patient care at regular intervals (usually once a week) until they recover (usually a two-month period). Families receive rations to prevent household sharing of the child’s RUTF ration.

4. **Stabilisation centres (SCs)** provide in-patient care for acutely malnourished children with medical complications. These children are at high risk of death and will be stabilised and then referred to OTP for continued treatment within respective communities. Malnourished children under 6 months of age are usually treated in in-patient settings.

Figure 2. World Vision’s nutrition projects in South Sudan
3. Adapting to context

South Sudan’s large area, poor infrastructure and unpredictable security situation make it a challenging and costly operating environment. Contextual challenges for CMAM programming include the following:

3.1 Gaps in capacity, resources and infrastructure

**CHALLENGES**

**Capacity for coordination**

In February 2014, a Level 3 Humanitarian System-Wide Emergency Response was declared in response to the crisis in South Sudan. This declaration recognised not only the scale, complexity and urgency of the crisis but also the inability to implement effective response without system-wide mobilisation. Due to the fragility and stretched capacity of the South Sudan Government and Ministry of Health (MoH), the bulk of leadership and service delivery have been taken on by the UN and partner NGOs.

Where CMAM programming would usually seek to align with and complement an existing MoH strategy and operations, in South Sudan much of the strategic planning and day-to-day coordination relies on support from UNOCHA through the humanitarian country team and the sectoral cluster groups.

**Gaps in multi-sectoral resources**

The response in South Sudan has been consistently underfunded. In 2015, only 41 per cent of the required US$1.6 billion has been committed. Stretched resources, in terms of funding and capacity, have left gaps in the system-wide response.

To be fully effective, CMAM should form part of a multi-sectoral response to malnutrition – provided alongside general and household-targeted food distribution and micronutrients supplementation. For example, CMAM’s impact is significantly undermined if adequate food is not available to the general population, if there is poor water and sanitation or disease, or if gaps in health care impede attention to the medical needs of children or pregnant mothers. Such gaps not only undermine the effectiveness of treatment for malnourished children, but can mean that the root causes of malnutrition are not addressed, decreasing the likelihood that GAM will drop below emergency levels.

**ADAPTATION:** In the context of these capacity and resource challenges, it is more important than ever for humanitarian agencies to actively participate in the cluster system. Despite stretched resources, the context demands agency commitment to attend the bi-weekly cluster meetings and ad-hoc sessions addressing specific operational issues. World Vision’s nutrition team also prioritises cluster reporting that ensures better coordination of programmes and helps identify and address gaps or areas of increasing need.

---

17 WHO, WHO responds to health crises facing war-wrecked South Sudan, (September 2014).
20 WHO.
knowledge and data from programmes such as World Vision’s can assist with prioritisation of funds for the best outcome for the people of South Sudan.

**CHALLENGE: Breakdown in RUTF supply chain**

Supplies for targeted supplementary feeding programmes (TSFP) were provided by WFP, and supplies for OTP and SC through UNICEF. Stretched resources resulted in breakdown of the supply of RUTF from WFP for World Vision’s CMAM work.

**ADAPTATION:** World Vision was able to secure alternative supplies from its Canadian and US offices as gifts-in-kind (GIK). Sourcing additional supplies through GIK has created a buffer so that breaks in the normal pipeline of RUTF do not affect the children we are treating.

**CHALLENGE: Poor local health infrastructure**

The World Health Organisation has highlighted that the current conflict’s impact on health infrastructure in South Sudan surpasses that of the two-decade civil war that ended in Sudan’s independence. While emergencies during the civil war were localised, the current fighting has spread to more than half the country, resulting in many more people being displaced.²⁰

Where fighting has spread, health facilities have been destroyed. Before the crisis, there were more than 300 out-patient treatment centres across the country; by mid-2014, the number had dropped to 183. Access to other programmes addressing acute malnutrition has also declined drastically.²¹ Where health facilities have escaped destruction and are able to operate, they face significant challenges, including lack of resources for training, low and irregularly paid wages, a lack of supervision at all levels and high staff turnover.²²

This poses two key challenges. Firstly, humanitarian agencies often struggle to find an appropriate base for their CMAM operations, including assessments and distributions, secure storage for RUTF and equipment, and access to referred services for children or pregnant women who require additional support. There is little assurance that children or pregnant women identified as needing additional health services or medication will be able to access them, whether due to location or cost.

**ADAPTATION:** In areas without a functioning health facility, World Vision sought and found alternative sites for CMAM activities, often having to transport equipment and RUTF supplies in and out on an ongoing basis to support activities – a challenge that is exacerbated by humanitarian access issues. (See below.)

Secondly, this situation interferes with a fundamental component of CMAM: capacity building of local health staff – seen as essential for the sustainability of the programme, which should ultimately transition to local health services.

---

²⁰ Ibid.
²¹ UNOCHA South Sudan, 5.
²² Global Health Workforce Alliance, South Sudan, (2015).
ADAPTATION: With capacity building of local health services out of reach in many of the conflict-affected areas where World Vision works, our focus is on building community capacity through volunteers. These community volunteers actively participate in case finding, referrals and follow-up.

However, this community capacity building does not allow for transition of CMAM responsibilities from World Vision. World Vision has accepted the need for the organisation to continue to lead CMAM projects in the immediate future and has planned and sought funding on this basis.

3.2 Access and population movement

CHALLENGE: Humanitarian access and population movement

Humanitarian access to populations is hindered by lack of infrastructure in South Sudan and by ongoing conflict as fighting prevents staff from travelling to affected communities. This can result in programme activities being delayed or suspended.

Poor roads and flooding during the rainy season also hinder access. When combined with the lack of secure storage for RUTF, this can mean that supplies must travel long distances by boat and by foot – increasing the time, cost and risk of programming.

Even before the fighting and in areas which are not directly affected by conflict, populations have been mobile. But the onset of conflict has greatly increased people’s movement as entire populations are displaced, sometimes repeatedly, by the fighting. This makes the ongoing contact required for CMAM very difficult.

ADAPTATIONS: The CMAM project model offers some measures which mitigate these impacts:

1. Increasing the ration of RUTF to malnourished children – providing two or even four weeks’ supply rather than one week’s supply, when fighting is predicted.
2. Training community members who can help monitor the children receiving treatment and also help ensure that children receive additional rations if access is impossible.
3. Where health facilities are being used, positioning supplies during the dry season before roads become flooded and inaccessible.

These mitigating measures are temporary and rely on the timely resumption of CMAM programming. Unfortunately this is not always possible.

The scale and severity of this issue has driven the trial of a Rapid Response Mechanism. This is coordinated through the nutrition cluster and aims to reach conflict-affected and hard-to-access civilians with multi-sectoral, life-saving interventions, including emergency nutrition.

3.3 Rapid Response Mechanism (RRM)

In partnership with other humanitarian actors in South Sudan, World Vision trialled a multi-sector Rapid Response Mechanism to meet the critical needs of displaced populations in hard-to-reach areas of the most affected states.

The RRM was designed in response to the disruption of essential aid due to insecurity, widespread displacement, destruction and closure of health facilities, and withdrawal or evacuation of staff as a result of violence.

RRM missions deploy mobile teams of nutrition; water, sanitation and hygiene (WASH); health; child protection and education technical specialists to hard-to-reach locations, where they assess and respond to the situation on the ground.24

Figure 3. Objectives of the inter-agency Rapid Response Mechanism

Between July 2014 and March 2015 World Vision was able to achieve the following through the RRM:

- **14 out-patient therapeutic programme (OTP) sites established across Unity and Upper Nile states**, exceeding the projected 13. The sites were established in Detwok, Gollo Aburoch, Mallo, Otego, Bol, Oriny, Paroch, Lul, Kodok payams (administrative districts) of Upper Nile State and in Nobor, Gany, Bieh and Buac in Unity State.

- **25,729 children screened for malnutrition** through community nutrition volunteers and regular mass MUAC screening exercises (116 per cent of project target).

- **825 children treated for MAM** through supplementary feeding programmes (SFPs).

- **301 children treated for severe acute malnutrition** through OTPs.

- **729 children with SAM referred** to existing static programmes.

- **10,486 children given blanket supplementary food rations**.

- **142 community nutrition volunteers** trained in CMAM and in infant and young child feeding in emergencies.

- **36 health workers trained in CMAM**.

- **180 Mother-to-Mother Support group leaders trained**.

---

What we learned

The learnings from World Vision’s RRM trial, captured on the following pages, provide some useful ways for improving the approach.

Positive effects

- In some locations RRM provided beneficial complementarity and surge capacity for existing CMAM programmes. In Bol and Otego payams in Fashoda for instance, the RRM greatly increased the coverage of existing CMAM programmes through mass MUAC screening and referral of children screened by RRM to the existing OTPs for follow-up.

- The RRM was quick to fill in gaps when a partner was phasing out – for instance when Médecins Sans Frontières pulled out of Fashoda, the RRM took over the OTP sites in Lul and Kodok. In Koch, the RRM made an impact on the hard-to-reach payams of Nobor and Gany. In addition, World Vision’s mobile RRM team took part in the inter-agency needs assessment in Kaldak and Canal, and enabled World Vision to preposition non-food items (NFI) and food items in Rumbek to support both World Vision and humanitarian partners’ activities in Canal and Khorfulus. This flexibility was imperative, given the fluid operational environment in South Sudan.

- In locations where the RRM team trained community nutrition volunteers and Mother-to-Mother Support groups, the number of children screened and enrolled tended to be higher and there was better follow-up of children even after provision of the RUTF. In Melut and Manyo, for instance, volunteers and health workers continued to monitor and provide food to registered children, even following the project phase out.

- In remote RRM sites where the caseload was very high, World Vision sought additional funding from other donors to establish a longer-term presence – such as the base at Koch in Unity State supported by World Relief.

- Though compliance with initial project design was taken very seriously during the RRM implementation, flexibility and sensitivity to a changing operational context were key to achieving some targets – such as establishment of 14 temporary OTP sites using tents, not semi-permanent structures as stipulated in the proposal.

- Complementarity with other existing programmes was critical in achieving project objectives.

Challenges

- Although the RRM was meant to support existing nutrition programmes in conflict-affected areas to increase their coverage in hard-to-reach or inaccessible locations through a flexible rapid mechanism, not all partners perceived it as such. Sometimes the mechanism was misunderstood as replacing, rather than complementing, their static programmes. In some instances this resulted in territorial tendencies, with partners on the ground claiming universal coverage, even when communities and the County Health Department (CHD) reported otherwise. This affected operations.
• The project design underestimated logistical challenges around accessing hard-to-reach locations. Some proposed locations were completely inaccessible in the rainy season, and support from the logistics cluster was not always available. Consequently several planned activities were not executed.

• During design, it was difficult to make accurate caseload projections due to lack of clarity on project locations; and lack of prevalence and incidence data resulted in overestimations. For instance, though the project exceeded its target of the number of children screened, the proportion admitted to OTPs was significantly lower than targeted.

• Where RRM coverage was low it can be traced to the changing operational context, with a drastic drop in the incidence and prevalence of acute malnutrition in the targeted areas, which was not factored into the project design. It is also possible that some malnourished children were not reached due to insecurity and population movements. For instance, operations in Canal County were later suspended due to recurrent insecurity.

• Some proposed interventions were not appropriate for the RRM model. For example, constructing semi-permanent OTP sites was not possible due to difficulties finding skilled contractors and transporting materials to the hard-to-reach locations.

• Inability to access commodities sometimes prevented the implementation of certain components of CMAM. Better early integration with the mobile food aid team could have mitigated this.

Recommendations

• There needs to be more flexibility to enable partners to implement the RRM, even in areas where there are no field-level agreements or partnership corporate agreements in place.

• Further integration of food aid mobile teams and nutrition RRM teams would enable partners to implement the full continuum of CMAM. This would involve targeting the same beneficiaries with the different packages for complementarity.

• If the RRM is to remain a life-saving mechanism, the logistics cluster must prioritise its support. Hard-to-reach locations present major logistical bottlenecks which partners cannot always overcome alone.

• Inter-cluster collaboration is needed to jointly develop an RRM roster to regulate activities. This will enable better coordination among the partners’ various rapid response teams.

• Mapping of capacity gaps among partners prior to RRM design would help identify specific areas of intervention, avoiding conflict and duplication of activities.

• Finalising the terms of reference for the RRM and ensuring it is widely disseminated to all partners will enable common understanding of the mutual benefit the model brings.
4. CMAM for child survival amid conflict

Results to date

In FY14 World Vision successfully treated 8,964 children – 3,537 for severe acute malnutrition and 5,437 for moderate acute malnutrition through CMAM. World Vision operated three stabilisation centres and 33 out-patient centres in Warrap and Upper Nile states.

World Vision food security interventions and WASH reached 190,520 people in FY14 during the same period, helping to address the causes of malnutrition and ensure that fewer children reach the limits of nutrition.

This response has continued in FY15, with the additional trial of the RRM. Despite the disruption of services due to flares of violence – particularly in Unity State and Upper Nile – World Vision managed to reach more than 235,000 people with food assistance, 97,000 people with WASH interventions, and 26,000 children and pregnant or lactating mothers with treatment for malnutrition.

In the 2015 calendar year, humanitarian actors have reached 757,435 people with nutrition interventions. Without interventions across these key areas, the current level food security and nutrition in South Sudan would be far worse.

World Vision’s experience in South Sudan shows that CMAM remains a critical tool for addressing emergency levels of global acute malnutrition in a conflict-affected context. While other interventions, and ultimately peace, are needed to address underlying causes, direct treatment of malnutrition is crucial to protect children from death and give them, and ultimately their country, the best chance at a secure future.

4.1 Nutrition programming in contexts of protracted conflict

Specific adaptations to the implementation of CMAM and the corresponding successes, challenges and recommendations will continue to provide useful lessons and ideas for other contexts. Three higher-level themes have emerged in South Sudan that may be relevant to nutrition programming in other conflict-affected contexts:

- **Flexibility and responsiveness**
  The flexibility and responsiveness that are typical in the earliest phases of a rapid onset emergency response are also crucial in contexts of protracted conflict, with teams empowered to respond to rapidly changing conditions. Nutrition teams on the ground must also have support to design and test new initiatives to overcome challenges. They should also be accountable for capturing and sharing the results and learnings of these initiatives.

• **Close coordination within and among cluster groups**

Close coordination within and between World Vision, the UN and humanitarian clusters is essential to tackling the challenges posed by protracted conflict. Weakened national infrastructure makes coordination between parties to the conflict, the UN, NGOs and sector clusters essential. Ongoing insecurity and humanitarian access issues mean significant support from UN OCHA, and the Logistics Cluster is required to assist with access negotiations and to deliver nutrition programmes.

• **Predictable and long-term funding**

The normal progression of CMAM, which involves transitioning capacity to local actors, may be impossible in situations of ongoing conflict. In the absence of this transition, predictable and long-term funding is essential. Without it, gaps in programme delivery and the loss of expert staff will hamper treatment of acute malnutrition.
References


A young girl at a Child Friendly Space in Upper Nile. An estimated 28,000 people sought refuge in Kodok in 2014 following the outbreak of fighting in Malakal between government and anti-government forces. Abraham Nhial Wei/World Vision 2015
World Vision is a Christian relief, development and advocacy organisation dedicated to working with children, families and communities to overcome poverty and injustice. Inspired by our Christian values, we are dedicated to working with the world’s most vulnerable people. We serve all people regardless of religion, race, ethnicity or gender.

World Vision International Offices

Executive Office
Waterview House,
1 Roundwood Avenue
Stockley Park
Uxbridge, Middlesex
UB11 1FG, UK

United Nations
Liaison Office
919 2nd Avenue, 2nd Floor
New York, NY 10017
USA

International
Liaison Office
Chemin de Balexert 7-9
Case Postale 545
CH-1219 Châtelaine
Switzerland

World Vision Brussels
& EU Representation
18, Square de Meeûs
1st floor, Box 2
B-1050, Brussels
Belgium

Web: wvi.org/disaster-management
Twitter: @wv_humanitarian
Email: heainfo@wvi.org

© World Vision International 2015