EVALUATION OF INTEGRATED MANAGEMENT OF ACUTE MALNUTRITION (IMAM)

Kenya Country Case Study
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Evaluation of Integrated Management of Acute Malnutrition (IMAM): Kenya Country Case Study

United Nations Children’s Fund
Three United Nations Plaza
New York, New York 10017

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This evaluation case study report for Integrated Management of Acute Malnutrition (IMAM) in Kenya was commissioned by the UNICEF Evaluation Office (EO) as part of a global evaluation of Community Management of Acute Malnutrition (CMAM) that includes examining UNICEF’s programme performance in five case study countries. The Kenya case study report was prepared by independent consultants, Sheila Reed, Camille Eric Kouam, Lina Njoroje, Clare Momanyi, Haile Selassie Okuku, and Geoffrey Onyancha.

Krishna Belbase, Senior Evaluation Officer, in the EO managed the overall process in close collaboration with the Kenya Country Office (CO) and Nutrition Section, Programme Divisionn (PD), New York. In Kenya CO, Mathieu Joyeux was the key counterpart and Erin Boyd and Dolores Rio were the main counterparts in Nutrition Section, PD.

The purpose of the report is to facilitate the exchange of knowledge among UNICEF personnel and its partners. The content of this report does not necessarily reflect UNICEF’s official position, policies or views.

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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<td>ART</td>
<td>Anti-Retroviral Therapy</td>
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<td>ASAL</td>
<td>Arid and Semi-Arid Lands</td>
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<td>CBO</td>
<td>Community Based Organization</td>
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<td>CHWs</td>
<td>Community Health Workers</td>
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<td>CMAM</td>
<td>Community Management of Acute Malnutrition</td>
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<td>CO</td>
<td>Clinical Officers</td>
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<td>CORPs</td>
<td>Community Resource Persons</td>
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<td>CTC</td>
<td>Community Therapeutic Care</td>
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<td>DCT</td>
<td>Diagnostic Counselling and Testing</td>
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<td>DHIS</td>
<td>District Health Information System</td>
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<td>DHMT</td>
<td>District Health Management Teams</td>
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<td>DHO</td>
<td>District Medical Officer</td>
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<td>DMOH</td>
<td>District Medical Officer of Health</td>
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<td>DNO</td>
<td>District Nutrition Officer</td>
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<td>DNTF</td>
<td>District Nutrition Technical Forum</td>
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<td>ENN</td>
<td>Emergency Nutrition Network</td>
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<td>EHRP</td>
<td>Kenya Emergency Humanitarian Response Plan</td>
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<td>FANTA</td>
<td>Food and Nutrition Technical Assistance</td>
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<td>FGDs</td>
<td>Focus Group Discussions</td>
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<td>FSNP</td>
<td>Food Security and Nutrition Policy</td>
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<td>GAM</td>
<td>Global Acute Malnutrition</td>
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<td>GoK</td>
<td>Government of Kenya</td>
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<td>HINI</td>
<td>High Impact Nutrition Interventions</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>IASC</td>
<td>Interagency Standing Committee</td>
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<td>ICCM</td>
<td>Integrated Community Case Management</td>
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<td>IMAM</td>
<td>Integrated Management of Acute Malnutrition</td>
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<td>IMC</td>
<td>International Medical Corps</td>
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<td>IMCI</td>
<td>Integrated Management of Childhood Illness</td>
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<td>IMNCI</td>
<td>Integrated Management of Neonatal and Childhood Illness</td>
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<tr>
<td>IP</td>
<td>Implementing Partner</td>
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<td>IRC</td>
<td>International Rescue Committee</td>
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<td>IYCF</td>
<td>Infant and Young Child Feeding</td>
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<td>IYCN</td>
<td>Infant and Young Child Nutrition</td>
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<tr>
<td>KARI</td>
<td>Kenyan Agriculture Research Institute</td>
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<td>KDHS</td>
<td>Kenya Demographic Health Survey</td>
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<td>KEMRI</td>
<td>Kenyan Medical Research Institute</td>
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<td>KEMSA</td>
<td>Kenya Medical Supplies Authority</td>
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<td>KNPR</td>
<td>Kenya Nutrition Programme Review</td>
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<td>KIMET</td>
<td>Kisumu Medical and Education Trust</td>
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<td>KUAP</td>
<td>Kisumu Urban Apostolate Programme</td>
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<tr>
<td>LOS</td>
<td>Length of Stay</td>
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<td>MAM</td>
<td>Moderate Acute Malnutrition</td>
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<tr>
<td>MCH</td>
<td>Mother and Child Health</td>
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<td>MDG</td>
<td>Millennium Development Goal</td>
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<tr>
<td>MO</td>
<td>Medical Officer</td>
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<td>MoH</td>
<td>Ministry of Health</td>
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<td>MOMS</td>
<td>Ministry of Medical Services</td>
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<td>MOPHS</td>
<td>Ministry of Public Health and Sanitation</td>
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<tr>
<td>MTCT</td>
<td>Mother to Child Transfer</td>
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<tr>
<td>MUAC</td>
<td>Mid-Upper Arm Circumference</td>
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NGOs Non-Government Organizations
NHSSP National Health Sector Strategic Plan
NFSNP National Food Security and Nutrition Policy
NNAP National Nutrition Action Plan
NSO Nutrition Support Officer
NTF Nutrition Technical Forum
OCHA Office for Coordination of Humanitarian Assistance
OECD-DAC Organisation for Economic Cooperation and Development/Development Assistance Committee
OJT On the Job Training
OTP Out patient Therapeutic Programme
PCA Programme Cooperation Agreement
PST Pre-service Training
HIV Persons Living with HIV
RTE Real Time Evaluation
RUSF Ready to Use Supplementary Food
RUTF Ready to Use Therapeutic Food
SAM Severe Acute Malnutrition
SC Stabilization Centre
SFP Supplementary Feeding Programme
SUN Scaling Up Nutrition
SWAP Sector Wide Approach to Programming
TORs Terms of References
UNDAF United Nations Development Assistance Framework
UNEG United Nations Evaluation Group
UNHCR United Nations High Commissioner for Refugees
UNICEF United Nations Children's Fund
W/H Weight for Height
WHO World Health Organization
WFP World Food Programme
EXECUTIVE SUMMARY

The Government of Kenya (GoK) through the Ministries of Public Health and Sanitation (MoPHS) and Medical Services (MoMS) initiated the Integrated Management of Acute Malnutrition (IMAM) in 2008 with MoPHS in the lead role. IMAM is currently one of 11 High Impact Nutrition Interventions (HINI) adopted by Kenya since August 2010. It is implemented in collaboration with UNICEF, WHO and WFP and implementing partners (IPs) as part of emergency nutrition. Other child nutrition interventions include Infant and Young Child Nutrition (IYCN) and prevention and control of micronutrient deficiencies.

Severe acute malnutrition (SAM) is a major childhood health challenge in Kenya, especially during emergencies. Wasting, a measure of acute malnutrition was estimated at 7% in 2009 but there are huge regional variations such as in Arid and Semi-Arid Lands (ASAL), where food insecurity and drought have affected the population. HIV and malnutrition are intrinsically linked; HIV contributes to 7% of deaths in children under five years of age; an estimated 13,000 children became newly infected with HIV in 2011.

UNICEF undertook this evaluation to assess IMAM performance and to document key successes, good practices, gaps and constraints in scaling up IMAM in Kenya. The evaluation will contribute to a global synthesis report. Four components of IMAM were evaluated: 1) Community outreach; 2) Outpatient treatment for SAM cases without medical complications; 3) Inpatient treatment for SAM cases with medical complications; and 4) Management of moderate acute malnutrition (MAM).

The criteria of relevance, effectiveness, efficiency, sustainability and scaling up were applied to IMAM components and to cross-cutting issues. Data were obtained from secondary sources, health system databases, observations during visits to sample IMAM sites and interviews with stakeholders. Quantitative data were analysed to determine whether IMAM targets were met and quantitative data supported the analysis. Data collection took place in 21 sites in nine districts. IMAM performance data was analysed from January 2010 to December 2011 for six districts.

Key Findings and Conclusions

The key findings and conclusions are organized by evaluation criteria and cross-cutting issues.

Relevance and Appropriateness

The Integrated Management of Acute Malnutrition (IMAM) has been effective in treating SAM cases in Kenya. Demand for IMAM as part of routine health services has increased due to its inclusion in district annual operational plans from 2008 onwards. The IMAM is further strengthened by being part of the HINI. Demand can be further enhanced through more effective community sensitization in tandem with the on-going decentralization of the health system.

The scale-up of IMAM has been facilitated by strong partnerships and coordination among the GoK, UN agencies, donors and NGOs aiming to build national capacity rather than create parallel delivery systems. A 2012-2017 National Nutrition Action Plan, signed in 2012, is aligned to the GoK’s Food and Nutrition Security Policy (2010) and Medium Term Plans facilitating mainstreaming of the nutrition budgeting process into national development plans. A national nutrition strategy is now in draft form.

Global Guidance and National Needs. The Kenya national guidelines for IMAM (2009) contain clear standardized treatment protocols but do not include enough guidance on community sensitization, information systems, and equity and gender equality. The lack of agreed standards and weak tracking for screening, referrals, relapse, readmissions, and home visits makes performance evaluation difficult for these aspects.
Technical and Organizational Support. Effective technical oversight provided through operational partnerships and the Nutrition Technical Forum (NTF) promoted significant gains in process, coverage and outcomes. A strong foundation was created for the nutrition sector response which stood out as one of the most effective to the food security and nutrition crisis of 2011. UNICEF and partners scaled up resources rapidly with the appropriate technical expertise and strong coordination support for nutrition. Challenges requiring stronger technical support include resource mobilization for long term support, assessment and planning, local production of ready to use therapeutic food (RUTF), and advocacy for stronger government support for nutrition. The District NTF and nutrition support officers are addressing weak aspects of service delivery in districts and communities.

Effectiveness – Coverage and Quality of Services

The IMAM has succeeded on average in meeting the Sphere standards for admitted SAM cases. On the job training (OJT) along with effective technical assistance and coordination have strengthened nutrition services. Good practices include mother to mother support groups and targeting IMAM caretakers in livelihood programmes. Services can be improved through providing play space in inpatient treatment facilities, increasing availability of WASH, and more dedication of staff time to counselling. It is important that the GoK provides incentives for Community Health Workers (CHWs) in recognition of their critical roles in case finding, counselling and follow-up.

Coverage. Geographic coverage of health facilities providing outpatient treatment for SAM is below 50% with a wide range between counties; Kinango, Yatta, Kitui and Laikipia have 10-20% coverage. Surveys are needed to accurately determine treatment coverage; coverage methodology has been agreed in 2012 and coverage investigation is now being rolled out.

Community Outreach. Although screening approaches are largely well organized, screening does not reach all children due to vastness of slums and rural areas that cannot be covered by the CHWs, migration, use of traditional healers, lack of transport, and dearth of information about screening opportunities. Caretakers may not follow up referrals due to awareness and access constraints. Community nutrition education has resulted in higher demand but lack of staff time limits individual counselling for caretakers.

Outpatient Treatment for SAM. During the period assessed (January 2010 to October 2011), the outpatient treatment achieved an average of 80.7% recovery rate, 1.5% death rate and 13% default rate in the sampled districts. The average length of stay was 59 days, with a relapse rate of 3.2%. Kisumu (17.3%) and Nairobi (19.3%) did not meet default standards; several districts exceeded the recommended length of stay (LOS). High default is due mainly to weak household follow-up, and caretakers seeking employment. The LOS is affected by pressures from caretakers to allow their children to continue to receive RUTF and weak tracking of weight gain.

Inpatient Treatment for SAM. The overall stabilisation rate for inpatient treatment was 84.6%, a death rate of 8.7%, a default rate of 1.4% and a relapse rate of 6.1%. Lack of a formal follow-up system to track stabilized children and ensure they return to outpatient treatment may contribute to relapses.

MAM Management. An 80.5% cure rate was achieved, with a death rate of 0.4% and a default rate of 14.5%. The average LOS was 81 days, and the relapse rate was 3.7%. Given community and government dependency on external assistance, developing a long term strategy to address MAM is a high priority, such as through optimizing community resources to improve local production and greater use of vouchers and cash to stimulate the local economy.

RUTF Supply and Logistics and Acceptability. RUTF is generally well accepted by children but efficient usage was hampered by sharing, contributing to relapses and longer stays. Supply and delivery of ready to use products is heavily supported by partners and the
high dependency of procurement on short term emergency funding limits supply and delivery capacity building efforts.

**Information and Monitoring Systems.** Despite a number of humanitarian information systems in Kenya, early warnings were not heeded in time to prevent a high incidence of acute malnutrition in 2011, indicating need for a more concerted dynamic analysis. The District Health Information System (DHIS) launched in 2011 has already provided timely data that has been useful in responding to malnutrition crises e.g. in the ASAL and Dadaab refugee camps. Gains in efficiency and effectiveness could be realized by continuously strengthening joint monitoring and implementing joint assessments and evaluations.

**Cross-Cutting Issues**

**Management and Coordination.** Good practices in planning include the Summary Results Matrix which incorporates HINI indicators directly relevant to IMAM and IYCN and with the Health Sector Wide Approach (SWAP). The formulation of the strategy for addressing urban malnutrition based on studies and lessons has led to strengthening nutrition services within the urban slums. Investments in technical coordination oversight for nutrition through the NTF have paid off in cohesiveness of response. More investment is needed for community based assessments to identify factors that influence supply and demand for IMAM. Stronger collaboration for intersectoral coordination could help to address the disjunctive funding and administration of relevant sectors as well as improve health sector coordination which IMAM depends upon.

**Sustainable Integration into the National Health System.** The High Impact Nutrition Interventions (HINI) have the potential of covering many underlying causes of malnutrition and preliminary results have been positive. The GoK financial support for HINI needs to be augmented and its executive support for the Division of Nutrition to assume the necessary levels of responsibility and accountability needs to be strengthened. A strategy for scaling up of IMAM needs the endorsement of both central and local authorities as well as long term funding to signify national commitment.

**Capacity Development.** Development of institutional capacity is on-going and is challenged primarily by high staff turnover and need for more health service capacity. The OJT has succeeded in helping staff members retain skills, however, a master plan and concomitant support from government is needed for sustainable scale-up. Stepping up pre-service training in nutrition for health professionals and more effective use of OJT tools will improve efficiency. Greater efforts are needed to help CHWs reach children in their homes, increase the efficiency of integrated interventions to reduce the implementation burden, and consolidate reporting requirements.

**Equity and Gender Equality.** Challenges affecting targeting and access include dependency on emergency funding which does not target all acutely malnourished children country-wide, remoteness of some health facilities, use of traditional medicine, possible stigma of HIV focus in some centres, and insufficient community assessment to identify children who may be missed. IMAM data is not always disaggregated by sex as recommended and more attention should be paid to explaining gender related findings in surveys.

**Efficiency, Sustainability and Scaling Up**

According to the evaluation costing study, in 2011, UNICEF supported 54% of IMAM costs while WFP contributed 30% and the GoK 16%. Supply of RUTF accounted for 24% of recurrent costs. Treatment cost per child was US$85 for the inpatient treatment and $94 for the outpatient treatment while MAM management cost $57 per child. The rate of fund disbursement was generally efficient but a significant constraint for partners was the long time necessary for approval of project documents and signing of the memorandum of understanding.
Major challenges for sustainability and scale-up are upholding government ownership, promoting further strengthening of the national health and supply and delivery systems, and reduction of costs through exploring locally appropriate alternatives to imported ready to use products. A key challenge is securing funding from non-emergency sources for IMAM continuity and expansion within the HINI.

**Key Recommendations**

<table>
<thead>
<tr>
<th>Relevance – Policy, Integration, Standards, Guidelines</th>
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<tbody>
<tr>
<td>1. Enhance Government of Kenya ownership and commitment to scaling up and strengthening IMAM within national health services through allocation of more resources.</td>
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<td>2. Finalize the draft national nutrition strategy and plan that outlines strategic priorities, ties together sectoral interventions that address the causes of malnutrition, into a master plan which identifies gaps and overlaps and confirms roles for nutrition authority and nutrition coordination.</td>
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<td>3. Jointly identify constraints and develop a framework and results matrix for sustainable integration of IMAM within HINI into the national health services.</td>
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<td>4. Expand the national IMAM guidelines making linkages to the other interventions or develop them as part of HINI guidelines, including detail on information and monitoring systems and equity and gender equality.</td>
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<td>5. Support the health sector to refine and operationalize the community outreach package tied to the community strategy along with developing guidelines for implementation of community outreach and indicators for judging performance.</td>
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**Effectiveness – Coverage and Quality of Services**

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<td>6. Conduct and ensure funding for regular treatment coverage surveys in districts where IMAM is being implemented.</td>
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<td>7. Improve quality of services and infrastructure where needed for outpatient and inpatient treatment facilities particularly through investment in WASH and play spaces.</td>
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<tr>
<td>8. Incorporate IMAM supplies (both equipment and RUTF) into the Kenya Medical supplies authority (KEMSA) as part of the basic essential care package.</td>
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<td>9. Strengthen supply and delivery services and increase reliability and sustainability in supply and delivery through a plan to build capacity in the government/MoH logistics system.</td>
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**Cross-Cutting Issues**

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<tr>
<td>10. Continue to strengthen joint monitoring and evaluation through regular joint evaluations, a standardized M&amp;E tool, and regular information dissemination.</td>
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<tr>
<td>11. Use GoK, regional and global mechanisms to promote intersectoral coordination by overcoming administrative and other barriers.</td>
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<td>12. Incorporate management of acute malnutrition in health workers pre-service curriculum to ensure adequate pre-service training in nutrition and extend training and job-support to CHWs and community units.</td>
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<td>13. Develop or use existing strategies and advocacy to ensure that standards for equity and gender equality are consistently addressed in community assessment, planning, monitoring and reporting.</td>
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<tr>
<td>14. Strengthen technical support for resource mobilization, assessment and planning in district/counties, enhancing nutrition technical support in counties and communities, advocating for greater evidence of government commitment to nutrition, and for more effective systems to allow scaling up for emergencies.</td>
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**Efficiency, Sustainability and Scaling Up**

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<td>15. Explore strategies for ensuring timely funding of IPs and implementation of IMAM interventions.</td>
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<td>16. Work with the private sector to determine the most cost effective and sustainable means to produce ready to use therapeutic and supplementary foods locally.</td>
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CHAPTER 1: INTRODUCTION

Severe Acute Malnutrition (SAM) is defined globally as a very low weight for height (below -3z scores of the median World Health Organization (WHO) growth standards, or below 70% of the median of National Centre for Health Statistics standard\(^1\) and by the presence of nutritional oedema. In children 6–59 months of age, a middle upper arm circumference (MUAC) less than 11.5 cm is also indicative of SAM. Moderate Acute Malnutrition (MAM) is defined as weight for height ≥ -3z and < -2z score or for children 6-59 months of age, MUAC ≥ 11.5 cm and < 12.5 cm.

It is estimated that nearly 20 million children worldwide are severely acutely malnourished. Most of them live in South Asia and Sub-Saharan Africa.\(^2\) According to WHO, children suffering from SAM have a 5–20 times greater risk of death than well-nourished children. SAM can directly cause death or indirectly increase the fatality rate in children suffering from diarrhoea and pneumonia. Current estimates suggest that about 1 million children die every year from severe acute malnutrition.\(^3\)

Treatment of SAM has evolved as a major intervention over several decades. Initially tied to lengthy in-patient stays linked to health facilities, it had limited coverage. Increased coverage of programs addressing SAM was made possible approximately ten years ago when the advent of a Ready to Use Therapeutic Food (RUTF) and an innovative community-based approach made it possible to treat the majority of children in their homes. This community-based approach, now widely known as the Community Management of Acute Malnutrition (CMAM), has gained widespread acceptance in the humanitarian sector and is now the preferred model for selective feeding in emergency and non-emergency contexts. The Integrated Management of Acute Malnutrition (IMAM) was initiated in Kenya in 2009 based on the CMAM model.

Acute malnutrition levels in Kenya remain unacceptably high. According to the 2008-09 Kenya Demographic and Health Survey (KDHS), 35.3% of children under age of five years are stunted, 16.1% are underweight and 6.7% are wasted. There are huge regional variations especially in the Arid and Semi-Arid Lands (ASAL), where food insecurity and natural disaster have affected the population. HIV and AIDS and malnutrition are intrinsically linked and HIV contributes to 7% of deaths in children under five years of age; an estimated 13,000 children became newly infected with HIV in 2011.\(^4\)

UNICEF, in cooperation with governments and other partners such as World Food Programme (WFP), World Health Organization (WHO) and NGOs, has made significant investments in more than 55 countries to scale up treatment of acutely malnourished children through community management. To consolidate the achievements made and to further enhance, scale-up and expand services, independent evaluations have generated concrete evidence on how well the global and country level strategies have worked including their acceptance and ownership in various contexts. Teams in Nepal, Pakistan, Ethiopia, Chad and Kenya conducted comprehensive assessments for use by national governments, UN agencies, NGOs and other stakeholders. A global synthesis will ultimately draw lessons from the five case studies as well as from other countries and partners around the world.

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\(^1\) Centers for Disease Control and Prevention (CDC).


\(^4\) UNAIDS website.
The Kenya Ministry of Health and UNICEF Kenya Country Office supported this evaluation to synthesize lessons and recommendations from the scale-up of Integrated Management of Acute Malnutrition (IMAM) for use by the government, UN agencies, donors, and NGOs. The evaluation will assist in advocating for resources for strengthening existing programs and expanding IMAM to other areas of the country. As part of the global CMAM synthesis, it will contribute to global knowledge for sharing among countries, as well as serve as input towards policy decisions with regard to future directions. (Please see the TOR in the annexes.)

This report is divided into seven chapters:
1. Introduction and Background
2. The IMAM in Kenya
3. Evaluation Scope and Methodology
4. IMAM Effectiveness and Quality of Services
5. Cross-cutting Issues
6. Cost Efficiency, Sustainability and Scale Up
7. Conclusions and Recommendations

### 1.1 Trends in Nutritional Vulnerability

Malnutrition in Kenya remains a big public health problem. Kenya has high stunting rates (35%) and is currently experiencing a rise in diet-related non-communicable diseases, such as diabetes, cancers, kidney and liver complications that are attributed to the consumption of foods low in fibre and high in fats and sugars. This double burden on malnutrition is not only a threat to achieving Millennium Development Goals (MDGs) and Vision 2030 but also a clear indication of inadequate realization of human rights. Vulnerability in Kenya is increased by extreme climatic conditions, high food prices and the deterioration of political and security conditions in neighbouring countries. Frequent cycles of drought result in high levels of child malnutrition and increased risk of diarrhoea and disease due to lowered immunity and poor levels of routine vaccination coverage. The Kenya Demographic Health Survey (KDHS) 2008/09 shows that compared to the 2003 KDHS, the Infant Mortality Rate (IMR) improved to 52 from 77 per 1000 live births and the Under Five Mortality Rate improving to 74 from 115 per 1000 live births. Reaching the Millennium Development Goals (MDGs) by 2015 - IMR (26/1000) and Under-Five Mortality (33/1000) - poses significant challenges.

As of the 2013 general elections, 47 counties in Kenya will form the basis for decentralized governance. The arid and semi-arid lands (ASALs) occupy more than 80 percent of the country and are home to over 10 million people9 of the total estimated population of 43 million.9 Failed or poor 2011 March-to-June long rains culminated in the third failed season in the south eastern and coastal cropping lowlands and the second failed season in the northern, north-eastern and eastern pastoral areas. The impacts of cumulative poor rains have eroded past gains that extended into August 2010 and precipitated a food security crisis in those areas. This has increased the food insecure population from 2.4 million in February 2011 to 3.75 million in September 2011.

Children with the highest degrees of nutritional vulnerability are pastoralists, residents of urban informal settlements, refugees, and those with HIV/AIDS. There is a continued increase in the urban population primarily driven by migration from rural areas by people 20 – 34 years of age. The number of people living in the slums represents more than 60% of the population.

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6 Achieving the Millennium Development Goal targets in under-five mortality (33/1000) and infant mortality (26/1000) by 2015 will be a challenge unless neonatal care, which is closely linked to maternal care, receives more attention. UNDP Kenya website.
population of the major cities, Nairobi, Mombasa and Kisumu, and up to half of the Kenyan population. Food poor households in urban slums spend up to 75% of their income on staple foods, feel the impact of inflation of basic food commodities by 133% and cope by reducing the size and frequency of meals.\textsuperscript{10} According to a survey by Concern Worldwide and funded by UNICEF in 2009, chronic malnutrition (38% stunting) among the urban poor is higher than the current national rate of 35.3%.\textsuperscript{11}

**Pastoralists** bore the brunt of the impact of the 2011 food security crisis, due to their extreme poverty; absolute poverty levels in northern Kenya were 65% in 1994 but increased to 74% in 2005/06. Results of nutrition surveys carried out in the ASALs in April 2011 showed levels of GAM to be above 20% for children under five years of age in Marsabit, Turkana, Wajir West-North (significantly higher compared to 2010) and Mandera. In Isiolo, and Garissa GAM rates were between 15% and 20%. In Turkana North West and North East, crude mortality rate (adults and children) and under-five crude mortality rates were above the emergency threshold.\textsuperscript{12}

The recurring conflict and instability in Somalia coupled with the Horn of Africa drought caused massive cross-border influxes at the rate of 30,000 arrivals per month in the Dadaab refugee camp alone in September 2011. A five-fold increase in refugee numbers compromised the quality of service delivery and further exacerbated existing environmental concerns such as deforestation and tensions between the host and refugee communities. Overall refugee and asylum-seekers in the country numbered 590,921 as of September 2011.\textsuperscript{13} More than 100,000 refugees live in Kakuma camp in the Rift Valley Province in north western Kenya. There are over 300,000 internally displaced persons (IDPs) in Kenya.\textsuperscript{14}

**HIV** is a generalized epidemic in Kenya, with some 1.4 million people infected. The size of the epidemic varies by area, ranging from an infection rate of some 13% in Nyanza to 0.9% in North-Eastern Province (NEP). Caseloads of PLHIV requiring targeted interventions from humanitarian actors are considerable: for example, Turkana has one of the highest HIV prevalence rates in the Rift Valley province at 5%, with close to 40,000 people living with HIV and estimated 15,000 people in need of anti-retroviral therapy (ART). As of mid-July 2011, only up to 5,000 were receiving this lifesaving treatment.\textsuperscript{15}

The Government of Kenya (GoK) is faced with serious challenges in meeting basic rights to food, water, health care and education. In 2011, public consultations identified two of five priorities as the need to ensure food security, and the need to increase provision of basic social services through recruitment of additional health and education personnel and developing efficient infrastructural facilities in the health and education sector. Overall, the Agriculture Sector Development Strategy (ASDS) which has been launched is key to the achievement of MDG Goal 1, eradication of poverty and extreme hunger.\textsuperscript{16}

Many interventions have been introduced to address age-specific health needs, contributing to the health impact; these include nutrition, maternal education, safe water, adequate sanitation, and proper housing, amongst others. From 2007 to 2011 the percentage of urban households with access to safe water increased from 60% to 70.5% while that for rural


\textsuperscript{14} UNHCR website

\textsuperscript{15} Kenya Emergency Humanitarian Response Plan 2012+

\textsuperscript{16} Kenya Vision 2030, First Medium Term Update, Ministry of State for Planning and Development, November 2011, pages 15-17.
households increased from 40% to 49.2%. Development, however, remains inequitable, with rural areas and some regions such as the ASALs still having poor services.

The health system’s capacity to respond to the chronic vulnerabilities and repeated shocks is impeded by the lack of qualified staff and inadequate outreach in hard-to-access areas, including those affected by drought. Although the overall health system expenditure has significantly increased in nominal terms, this increase is primarily driven by government and donor resource increases, however, there has been no real increase in health system resources. The health worker density varies widely from less than 4.1 per 10,000 in north-eastern and Turkana to 15 per 10,000 in Nairobi.

Key priority areas requiring strengthening in the health system include early warning and disease surveillance; communication and information sharing across the levels of the health care delivery system; sustained field technical and coordination support; effective surge capacity at targeted locations; trained human resources; and, logistical and operation support to district health management teams (DHMTs). In Kenya, as in most of Africa, it is estimated that 80% of the population use traditional medicine services and these have been nationally integrated in addressing HIV/AIDS and other prevalent health issues.

1.2 Nutrition Trends for Children Under Five Years of Age

Malnutrition continues to threaten a significant proportion of Kenyan children and women. Although there have been improvements in underweight in children under five years of age, not much progress is seen in reducing the prevalence of chronic under nutrition (stunting) and acute malnutrition (wasting). Data presented in the 2011 Kenya Emergency Humanitarian Response Plan 2012+ indicated that more than 385,000 children and 90,000 pregnant and lactating women suffer from malnutrition. Of these, 65,000 children were severely malnourished.

![Figure 1.1: SAM and MAM caseloads in April 2012 (produced by UNICEF, using DHIS data)](image)

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19 Ibid, page 94.
Comparison of the 2008-09 results with those from the 2003 Kenya Demographic and Health Survey (KDHS) using the previous nutritional growth standards (NCHS/CDC/WHO) indicates that there has been almost no change in the proportion of children who are stunted, wasted, and underweight. According to the 2008 KDHS findings, 35 percent of Kenyan children are stunted, while 14 percent are severely stunted. The KDHS shows that 7 percent of Kenyan children are wasted, with 2 percent severely wasted. Sixteen percent of Kenyan children are underweight, with 4 percent classified as severely underweight.

Trends in nutritional status are difficult to ascertain due to the adoption of new growth standards in 2009 as well as to the fact that many previous surveys omitted parts of northern Kenya. Analysis of the indicator by age group shows that wasting is highest (11 percent) in children age 6-8 months and lowest (4 percent) in children age 36-47 months. The proportion of underweight children is highest (19 percent) in the age groups 24-35 and 48-59 months and lowest (8 percent) for those less than six months of age. Female children (15 percent) are slightly less likely to be underweight than male children (17 percent). The survey data show that North Eastern province has extraordinarily high levels of wasting: 20 percent of children under five in North Eastern province are wasted and 8 percent are severely wasted. These levels may reflect food stress in the province, which is traditionally a region with food deficits. The proportion of underweight children is negatively correlated with the level of education of the mother. Children whose mothers have no education have the highest levels of underweight (28 percent), while children of mothers with some secondary education have the lowest (8 percent). Wealth and nutrition status of mother are also negatively correlated with the proportion of children who are underweight.\(^2\)

### 1.3 Policies and Interventions to Address Nutrition

#### 1.3.1 The Nutrition Sector in Kenya

Within the Ministry of Health (MoH), the Division of Nutrition, anchored in the Ministry of Public Health and Sanitation (MoPHS), bears the major responsibility for the nutrition sector.

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The MoPHS is responsible for the delivery of primary care including provision of Kenya’s essential package for health services at the community level and through outreach. The Ministry of Medical Services (MoMS) is responsible for hospital services, including the inpatient care in inpatient treatment facilities, for severely malnourished children with medical complications in the IMAM intervention. Other ministries directly and indirectly involved in addressing nutrition include agriculture, livestock, fisheries, health, education, environment, natural resources, water, irrigation, trade, industry, and planning. Educational and research institutions, such as universities, the Kenyan Medical Research Institute (KEMRI) and the Kenya Agricultural Research Institute (KARI) are also involved.

At community level, the MoPHS addresses malnutrition through the Community Strategy for the delivery of level one services. The overall goal of the community strategy is to enhance community access to health care in order to improve productivity and thus reduce poverty, hunger, and child and maternal deaths, as well as improve education performance across all the stages of the life cycle. This strategy is in process and is being implemented through the decentralization of services and accountability. However, the community units for implementation of the strategy are under development at present and in most districts lack adequate community level capacity.

1.3.2 Policies Addressing Nutrition

The Constitution of Kenya recognizes the fact that ‘every person has the right to be free from hunger, and have adequate food of acceptable quality’ (Chapter four, The Bill of Rights, article 43c).


Importantly, policy guidelines exist to address nutritional needs of infants and young children and those living with HIV and AIDS. There is a Food Security and Nutrition Policy (FSNP), 2010; and a National Strategy on Infant and Young Child Nutrition; a Food Security and Nutrition Strategy has been developed to ensure smooth implementation of the FSNP. The 2012-2017 National Nutrition Action Plan (NNAP) has been endorsed by the GoK and provides a framework for coordinated implementation of nutrition intervention activities by the government and nutrition stakeholders. The National Guideline for Integrated Management of Acute Malnutrition, assists health workers in assessment, management and treatment of acute malnutrition, both for MAM and SAM. The national nutrition strategy directly relates to the MDG goals 1, 4, 5 and 6.

The GoK’s National AIDS/STI Control Programme (NASCOP) and partners have worked to integrate food and nutrition. FANTA and UNICEF supported national efforts to develop and disseminate the Kenya National Guidelines on Nutrition and HIV/AIDS, which establish nutrition recommendations for persons living with HIV (PLHIV), and describes actions that service providers need to take to provide nutrition care. In 2010, the government adopted the WHO rapid advice on Infant Feeding and HIV which has been followed with national guideline revision and integration of efforts to move towards virtual elimination of mother to child transfer (MTCT) of HIV.

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21 Taking the Kenya Essential Package for Health to the community A Strategy for the Delivery of LEVEL ONE SERVICES.
22 Ibid.
1.3.3 National Nutrition Programmes

The following are the main categories of nutrition programmes in Kenya:

- Maternal and Infant and Young Child Nutrition
- Micronutrient Deficiencies Control and Prevention
- Emergency Nutrition

Numerous programmes have been scaled up to improve nutrition in Kenya, including the Infant and Young Child Feeding Nutrition (IYCN) intervention, micronutrient supplementation and fortification; supplementary food distribution in food insecure areas; as well as the High Impact Nutrition Interventions (HINI) countrywide approach. The Ministry of Public Health and Sanitation (MoPHS) implemented a package of interventions to address infant and young child health between 2003 and 2008 and since then the nutrition sector has moved to more preventive and integrated interventions.

In tandem with the continuing efforts to integrate nutrition services into the health system, the MoPHS, UNICEF and other partners have adopted 11 HINI. At the start-up partners and UNICEF went into partnerships to scale-up the full package, starting with a pilot in 3 districts in late 2010 and rapidly expanded in most districts early 2011; this served to prepare for the food security and nutrition crisis. HINI was first extensively discussed in the Lancet (January 2008) five part series on nutrition as effective in preventing malnutrition and mortality in children (26% of deaths prevented).

The HINI package has been endorsed by a larger group of partners including the European Commission in the “Scaling Up Nutrition (SUN) - A Framework for Action”. The SUN has been endorsed by over 100 international development agencies, including UNICEF and WFP. The SUN Movement is focused on implementing evidence-based nutrition interventions and integrating nutrition goals across sectors – including health, social protection, poverty alleviation, national development and agriculture. The GoK launched the SUN in Kenya at a National Nutrition Symposium on 5 November, 2012. The NNAP also provides an opportunity for integration within the other sectors.

The HINI interventions include: breast-feeding promotion, complementary feeding for infants after the age of six months, improved hygiene practices including hand washing, vitamin A supplementation, and zinc supplementation for diarrhea management, de-worming, iron-folic acid supplementation for pregnant women, salt iodization, and iron fortification of staple foods, prevention of moderate under nutrition and treatment of acute malnutrition. Exclusive breastfeeding (EBF) has been prioritized as one of the HINI interventions and a main intervention for the Nutrition Action Plan 2012-2017 strategic objective number 2: To improve the nutritional status of children under 5 years of age. With reference to data on infant and young child nutrition, KDHS 1998, 2003 and 2008-09 show that the median duration of breastfeeding has remained at 21 months. KDHS 2008/09 also indicates a significant improvement in EBF of children less than six months of age at 32% compared to 11% in 2003.

Micronutrient deficiencies are highly prevalent among children under the age of five years and women. According to 1999 national micronutrient survey in Kenya, the most common deficiencies include vitamin A deficiency (VAD), iron deficiency anemia (IDA), iodine deficiency disorders (IDD) and zinc deficiency. There are national micronutrient guidelines highlighting key strategies used in prevention and control of micronutrient deficiencies. These include supplementation, food fortification, and promotion of dietary diversification and public health measures such as de-worming and malaria control. The National Micronutrient


24 SUN website.
Deficiency Control Council and the Kenya National Food Fortification Alliance are the national coordinating structures for the micronutrient deficiency control programme. The NNAP stipulates provision of two doses a year of Vitamin A supplements and multiple-micronutrients powder for children 6-59 months of age.

The IYCN is one of the major interventions and is implemented in collaboration with partners such as UNICEF and WHO, civil society and other stakeholders. Achievements documented include integrating IYCN into all emergency programmes (reaching 30% of the districts in Kenya); provincial and district review of nutritional targets and technical strategies; and, IYCN interventions in urban slums and other non-emergency areas Nyanza, Nairobi, Eastern and Coast Provinces.

Kenya is vulnerable to disaster in the form of drought, flood, fires, landslides and internal and cross-border civil strife, resulting in loss of human lives, livestock, and livelihoods, and deterioration of health and nutrition status of the affected population. Women, children and elderly are especially vulnerable. The NNAP has outlined a broad spectrum of activities to prepare for and respond to emergencies, including developing guidelines, strengthening the capacity of the county Nutrition Technical Forums (NTF) to develop and implement emergency response plans, creating public awareness on the importance of nutrition in emergencies, and strengthening coordination mechanisms, monitoring and evaluation systems, logistics management and supply chain system for food and non-food items, and resource mobilization for timely response.

A number of good practices have contributed to KAP in urban nutrition, these are among them.

The “Towards Innovations and Best Practice in Urban Nutrition” workshop was held on August 25th, 2010 jointly by Ministry of Public Health and Sanitation, Nairobi City Council, Concern Worldwide, World Food Programme and UNICEF Kenya. This workshop provided an opportunity for sharing innovative approaches for improving nutrition and food security for households and vulnerable populations in Urban Slums.

Comprehensive Food Security and Vulnerability Analysis (CFSVA) and Nutrition Assessment in Kenya High Density Urban Areas, Government of Kenya, World Food Programme, Food and Agriculture Organization (FAO), and FEWSNET, 2010. This analysis is based on division of the urban areas across the country into livelihood zones which contributed to understanding of the impact of 10 classifications of livelihoods on food security and malnutrition.

The Kap Survey For IYCF Pilot Strategies In Urban Slums Of Korogocho, Mukuru Njenga And Nyalenda, undertaken by Concern Worldwide (November 2011), researched three approaches to programme development and contributed to lessons.

1.3.4 Role of Donors and Assistance Organizations
UNICEF is a key partner to the government in its efforts to address malnutrition in the country. The World Food Programme is the main provider of supplementary foods. The Humanitarian Aid and Civil Protection department of the European Commission (ECHO) is one of the major donors for nutrition assistance. The World Bank has recently provided a loan to the government for nutritional activities. USAID through the Office of Foreign Disaster Assistance and the United Kingdom’s Department for International Development (DFID) fund NGOs to implement programmes and projects on their behalf. USAID is embarking on the “Feed the Future” agricultural development programme in Kenya which has an intermediate

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26 IYCN Fact Sheet for 2012, UNICEF.
goal of “Improved Nutritional Status”. Others are UN agencies such as UNHCR working with refugees and IDPs, and the Office for the Coordination of Humanitarian Affairs (OCHA) through the Central Emergency Response Fund (CERF).

Emergency donors have moved from supporting acute malnutrition alone to supporting a more comprehensive package that would prevent acute malnutrition and supporting integration of management of acute malnutrition in health and other systems. There are encouraging signs that Paris-Accra principles of aid-effectiveness are being applied for nutrition. While UNICEF’s support in nutrition has always been to and through government programmes, other donors, such as USAID, DANIDA and DFID and GTZ are also working with the government through the Health SWAP.27

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CHAPTER 2: INTEGRATED MANAGEMENT OF ACUTE MALNUTRITION (IMAM) IN KENYA

This chapter discusses IMAM programme evolution, programme design, governing policies and agreements among partners for IMAM implementation.

2.1 IMAM Evolution

Over the past decade there has been a global initiative to shift from facility-based treatment approaches to a decentralized community based approach. This shift is founded on evidence that in many poor countries, the majority of children with severe acute malnutrition (SAM) are never brought to health facilities and in these cases, only an approach with a strong community component can provide them with an appropriate care.\(^{28}\)

The government of Kenya launched the “National Guidelines for Integrated Management of Acute Malnutrition” (2009) as a means to promote a standardized approach. The guidelines provide an opportunity for all health care providers to realize the importance of prompt and proper management of health facility and community levels to ensure successful diagnosis and treatment and consequently addressing Millennium Development Goal (MDG) 4 which aims to reduce child mortality.

2.2 IMAM Design and Implementation in Kenya

Although the global CMAM model clearly includes the concept of integration into national health services and with other programmes, the Kenyan model expands the degree and type of integration, working more seamlessly through numerous health and nutrition activities, such as preventive nutrition initiatives, including promotion of breastfeeding and appropriate complementary feeding, and provision of relevant nutritional counselling information and messages. IMAM more explicitly addresses SAM treatment and management of MAM in the context of HIV and AIDS.\(^{29}\)

Traditionally, the Kenyan Ministry of Health (MoH) had rehabilitated children with SAM within inpatient services, mainly through District and Provincial Hospitals, which treated all cases with therapeutic milk-based formulas (F75 and F100) administered by medical staff. These facilities were often overcrowded which promoted cross-infections, and required lengthy stays that led to high default rates and the mother’s absence from her other children for extended periods. Three key innovations at global level allowed the evolution from total inpatient to community-based care with outpatient and inpatient treatment:

1. The development of ready-to-use therapeutic foods (RUTF), which are lipid-based and thus resistant to contamination and which do not require medical oversight;
2. A new classification distinguishing between severe cases with and without medical complications; and
3. The use of simple, colour-coded middle-upper arm circumference (MUAC) measuring tapes for diagnosis that allow community members to be trained to identify acute malnutrition for referral to treatment.

There are two basic objectives of the management of acute malnutrition in Kenya\(^ {30} \):

1. To prevent malnutrition by early identification, public health interventions and nutrition education.
2. To treat acute malnutrition to reduce associated morbidity and mortality.

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\(^{28}\) Community-Based Management of Severe Acute Malnutrition, A Joint Statement by the World Health Organization, the World Food Programme, the UN Systems Standing Committee on Nutrition and UNICEF.


The IMAM model follows the CMAM global model with four distinct components: community outreach, outpatient treatment for children under five with SAM without complications, inpatient treatment for SAM with complications, and supplementary feeding for the management of MAM. These four IMAM components are offered in the context of broader preventive services, as illustrated in Figure 2.

![Figure 2.1: The four components and linkages of the IMAM in Kenya](image)

### 2.3 IMAM Policy

The Government of Kenya (GoK) through the *Kenya Vision 2030* aims at achieving good nutrition for optimum health of all Kenyans. The *Food and Nutrition Security Policy* (FNSP, 2012) provide an overarching framework covering the multiple dimensions of food security and nutrition improvement. It has been purposefully developed to add value and create synergy to existing sectoral and other initiatives of government and partners and is framed in the context of basic human rights, child rights and women's rights, including the universal "Right to Food". The 2012-2017 *National Nutrition Action Plan* approved in 2012 provides a framework for coordinated implementation of nutrition intervention activities by the government and nutrition stakeholders. The *National Health Sector Strategic Plan* (2008-2012) which sets out steps for health system reform is also important as the plan acts as a guide for performance assessment and provides clear strategies, objectives and outputs that will guide stakeholders to implement projects and programmes to achieve the health sector objectives.

The Maternal, Infant and Young Child Nutrition (MIYCN) policy identifies evidence-based best practices to support care for parents during pregnancy, childbirth and to support optimal safe feeding of infants and young children in all circumstances. The MIYCN also includes policy statements on feeding during difficult circumstances, such as the Kenyan Breast milk Substitute Control Act (draft 2009), key child survival strategies and guiding principles of decision makers and health care personnel implementing maternal, women and children's health and nutrition programmes at national, district, facility and community level.\(^\text{31}\)

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\(^{31}\) Infant and young child feeding Policy draft 2007.
The GoK is committed to promote exclusive breastfeeding, support micronutrient supplementation; ensure equitable access to high impact nutrition and health interventions and increased uptake of optimal feeding and hygiene practices; and, support expansion of growth monitoring and promotion to all communities. There is a need for health care personnel to receive up to date knowledge and skills on appropriate IYCF practices to provide quality counselling and adequate support to mothers and caregivers.

The IMAM contributes to the UNDAF outcomes 1: Increased access to and use of basic social services with particular attention to marginalized and vulnerable populations; UNDAF outcome 2: Enhanced capacities of key national and local institutions for improved governance; UNDAF outcome 3: Reduce further spread of HIV/AIDS and improve the quality of life of those affected by HIV/AIDS; and UNDAF outcome 6,7 & 8: Enhanced institutional and technical capacity for disaster management (preparedness and response) policy formulation and implementation.

2.4 Management of Acute Malnutrition and Partnership Arrangements

There are approximately 899 sites which provide nutrition therapeutic services in Kenya covering two categories of populations: urban and Arid and Semi-Arid Lands (ASAL). Among the urban populations, (2011 numbers) there were about 80 sites in Nairobi area, 22 sites in Kisumu, and the remainder were located in the ASAL (around 90%). IMAM is implemented through the government systems and based on mutually binding agreements detailing the partnerships. In 1993, UNICEF and the Government of Kenya signed a Basic Cooperation Agreement which establishes the terms and conditions under which UNICEF cooperates in programmes and master plan of operations in Kenya. Currently, the Ministry of Public Health and Sanitation is mandated to take the lead in implementation and management of IMAM.

In 2010 a partnership framework between the Ministries of Health (Ministry of Public Health and Sanitation and Ministry of Medical Services), UNICEF and WFP to support Delivery of Essential Nutrition Services in Kenya was created to guide implementation of nutrition interventions. The Partnership Framework also contains the roles of the IPs and represents an enhanced engagement by Nutrition sector partners to respect general principles of support to MOH; and by MOH to facilitate integration of nutrition interventions at National and Sub-national level (UNICEF KCO, 2011).

UNICEF, WFP and NGOs work in close collaboration with the MoH. Roles and responsibilities are defined between MoH and partners through a signed annual work plan or memorandum of understanding. UNICEF directly supports the MoH in capacity building of health workers through on the job training (OJT); supports and participates in coordination mechanisms; direct support at district level in monitoring and reporting; and in management and availing nutritional supplies. Indirectly, the agency works through NGOs as may be outlined in partnership agreements, which may involve transfer of resources after signing Programme Cooperation Agreements (PCAs).

The WFP often engages NGOs to support its joint programming with the MoH. Both WFP and NGOs honour the principles of the framework and the national Memorandum of Understanding (MOU) between WFP/MoH/UNICEF. At the sub-national level, WFP has Field Level Agreements (FLA) with the NGOs. The Nutrition implementing partners (IPs) are the Ministry of Public Health and Sanitation (MoPHS) and Ministry of Medical Services (MoMS) together with the division of nutrition in collaboration with national and international NGOs.

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32 Kenya National Food Security and Nutrition policy framework.
34 Partners and numbers of facilities offering nutrition services per district in drought affected ASAL: Kenya Nutrition Information, UNICEF September 2011.
ROLE OF PARTNERS

Ministry of Public Health & Sanitation (MoPHS) and Ministry of Medical Services (MoMS)
- Chair NTF and related Working groups.
- Ensure NTF and WG follow up of action points in collaboration with partners.
- Support and Ensure ToRs for National, Province and District Nutrition Coordination and Information system are respected.
- Address issues raised in District Coordination meetings minutes in collaboration with partners.
- Facilitate integrated implementation of HINI at National and sub-national level.
- Ensure and advocate for fortification, micronutrients and systematic essential drugs supplies.
- Ensure and advocate for availability of adequate human resources at National, District and Health Facility level.
- Ensure dissemination of National Guidelines, OJT tools and other relevant documents to sub-national level in collaboration with partners.
- Support sub-national level capacity building, supervision and mentoring (OJT).
- Support and facilitate community strategy implementation.
- Facilitate signing of MOUs between partners and MOH at National level and Agreement /TOR at District level.
- Ensure those MOUs are implemented.

UNICEF, WFP and NGOs in Supporting and Strengthening MoPHS & Partners:
- Deliver High Impact Nutrition Interventions (HINI).
- Ensure that efficient coordination mechanisms are in place at all levels.
- Include key indicators and interventions in Annual Work Plans and budgeting processes at district and regional level.
- Maintain efficient nutrition surveillance, monitoring and reporting systems.
- Monitor actions which slow down progress in critical nutrition issues (e.g. Code violations).
- Act as advocates for sound and sustainable nutrition policies and interventions. This includes the below direct and indirect interventions to prevent and treat under nutrition.


A significant number of IMAM guidelines and job aids, such as posters, counselling cards, and flowcharts, have been developed and disseminated. These include the National Guideline for Management of Acute Malnutrition, 2009; Handbook on Integrated Management of Acute Malnutrition, 2010; Trainer’s Guide on Integrated Management of Acute Malnutrition, 2010; and wall chart detailing: Criteria to identify Severe, Moderate and At Risk categories of Acute Malnutrition; Management of Acute Malnutrition in Health Facility; and Triage for Acute Malnutrition; and IMAM Table Flipcharts on management of acute malnutrition. Other guidelines are listed in the box below.

List of National Guidelines and Standards for IMAM
- National Guideline for Integrated Management of Malnutrition
- National Guideline for Mortality and Nutrition Assessment
- Kenya National Training Curriculum on Nutrition and HIV&AIDS
- Draft Food and Nutrition Policies 2008-2015
- Kenya National Guideline on micronutrients deficiency control
2.5 Past reviews and Evaluations

Findings and recommendations from nutrition exercises and evaluations have been woven into the discussions in this evaluation with appropriate referencing. It is difficult to isolate IMAM from other high impact nutrition interventions (HINI). Most past reviews and evaluations have not focused specifically for IMAM rather they address nutrition as a whole. In the Kenya Nutrition Bulletin published by the division of nutrition in the MoPHS on a quarterly basis, updates are given on nutrition survey results and IMAM which act as a guide on issues that need to be addressed.35

A Kenya Nutrition Programme Review (KNPR, 2011)36 was undertaken to examine the overall nutrition strategy of Kenya, the sustainability of the nutrition programmes and strategies, as well as the accountability mechanisms and the funding and partnerships arrangements. The KNPR identified stunting as a key nutrition issue that impacts national development and recommends strengthening maternal and reproductive health including anaemia reduction, strengthening community based interventions and leadership for nutrition in the MoPHS, and revising nutrition indicators linked to stunting reduction.

A Kenya case study, “Experience in scaling up IMAM in Arid rural areas and urban settings”, was presented at the CMAM/SUN conference held in Addis Ababa in November 2011 and was subsequently used in a synthesis of case studies.37

The Interagency Standing Committee (IASC) Real Time Evaluation – Kenya 2012 offers insights into the nutrition response to the food security crisis and drought emergency.

37 Experience in scaling up IMAM in Arid rural areas and urban settings”, presented by Valerie Wambani, MoPHS, CMAM/SUN conference held in Addis Ababa in November 2011.
CHAPTER 3: EVALUATION SCOPE AND METHODOLOGY

3.1 Evaluation Scope
The purpose of the evaluation is to assess the performance of IMAM in Kenya in terms of its relevance and appropriateness, effectiveness and coverage, efficiency and quality, and sustainability and scalability. The evaluation seeks to assess the degree of success achieved in the treatment of acute malnutrition in Kenya and to gather lessons learned for application in Kenya and other national community managed programmes.

The evaluation design relied on baseline and routine monitoring data and in-depth interviews and focus groups discussions in IMAM sites. The evaluation addresses the questions posed in the Terms of Reference (see annexes). This evaluation will contribute to a global synthesis of good practices and lessons learned. Because of its national and global scope, the users will be very wide ranging, including governments, UN agencies, donors, NGOs, academic institutions, and community groups in Kenya and in many other countries.

In Kenya the evaluation examined processes and results related to the four key components of the IMAM: Community outreach, Outpatient care for children with SAM without medical complications, Inpatient care for SAM cases with medical complication, and Outpatient management of MAM.

3.2 Evaluation Objectives
The purpose of the evaluation is to examine IMAM performance in Kenya by undertaking an analytical assessment of the progress achieved in implementing IMAM to-date, specifically to:

1. Assess IMAM relevance and appropriateness, efficiency and quality of services;
2. Assess the effectiveness, impact and sustainability of the programme;
3. Assess the how far cross-cutting/system strengthening issues like coordination, governance, and management, gender and equity, capacity development, advocacy and policy development, and information/data management have developed.
4. Document good practices and generate evidence-based lessons and recommendations to strengthen efforts towards the expansion of IMAM coverage in Kenya.

3.3 Evaluation Team and Consultative Bodies
The Kenya evaluation was conducted by a team composed of independent national and international consultants. The national evaluation team for Kenya was composed of Lina Njoroge (Team Leader), Nutrition Specialist; Geoffrey Onyancha, Public Health Specialist; Haile Selassie Okuku, Bio-statistician; and Clare Momanyi, Food Security and Nutrition Expert. The national team was joined also by a global synthesis team composed of Camille Eric Kouam, CMAM expert; and Sheila Reed, evaluation expert, who provided oversight.

An Evaluation Steering Committee was formed among the UNICEF Country Office (CO) and Eastern and Southern Africa Regional Office (ESARO) to provide guidance and included: Noreen Prendeville, Head of Nutrition Section, Kenya CO; Mathieu Joyeux, Nutrition Specialist, Emergency, Kenya CO; Isa Achoba, Chief Strategic Planning and Monitoring and Evaluation, Kenya CO; and Katrien Ghoos, Nutrition Specialist, ESARO.

3.4 Evaluation Methodology
The evaluation was carried out between November 9th 2011 and January 27th 2012 and employed both secondary and primary data collection methods. Activities carried out as part of the evaluation exercise included but were not limited to:
Visit to health centers and outreach sites for outpatient and inpatient treatment and meeting with managers, health workers and other staff.

Individual interviews with UN agencies including UNICEF, UNHCR, WHO, and WFP.

Interviews with relevant partners implementing IMAM and Nutrition officers at national and district levels.

Individual Interviews with District Health Office (DHO) including District Medical Officers (DMOs), District Nutrition Officers (DNOs), Medical Officers (MOs), Clinical Officers (COs) and Nurses.

Interviews with Community Health Workers (CHWs).

Focus group discussion with community leaders and caretakers.

Direct observation of IMAM activities at the sites (health facilities and outreaches).

3.4.1 Sampling Frame

Given the vast number of IMAM sites (899) and the time limitations for data collection, a purposive sampling was used to select the sampled sites. An attempt was made to ensure that this sample was an accurate representation of the sites that provide IMAM. The sampling included almost all the regions in the country in order to experience the different challenges or successes related to the contexts. One of the regions in Kenya bordering Somali is affected by insecurity and therefore was not included in the sample. The sampling framework included 14 selection criteria. Table 3.1 indicates the sampling framework used for the selection of the districts visited. Nine districts covering 21 sites were included (Table 3.2). Ultimately some sites had to be dropped due to time or accessibility restrictions; thus 19 sites were visited in 8 districts representing about 90.5% of the target sample. Makueni District, being one of the sampled areas was dropped at last minute due to logistical issues.

Table 3.1: Sampling Framework

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>District / Area</th>
<th>Kitui</th>
<th>Makueni</th>
<th>Turkana</th>
<th>Kajiado</th>
<th>Kisumu</th>
<th>Nairobi</th>
<th>Kilifi</th>
<th>Laikipia</th>
<th>Samburu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Urban population</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ASAL population</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Pastoralist &amp; Migrating populations</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Refugee population</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Government Only</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 NGO + Govt</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Private sites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 High Malnutrition rates</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 High HIV / AIDS rates</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
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<tr>
<td>10 High numbers of relapse and defaulthers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>11 Success - Integrated approach – Public Private Partnership (PPP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>12 Length of programme (&lt; 1 yrs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Lake and Coastal regions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 HINI (High Impact Nutrition Interventions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 3.2: List of Sampled Sites Based on Sampling Frame

<table>
<thead>
<tr>
<th>Name of Site</th>
<th>District</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kajiado District Hospital</td>
<td>Kajiado</td>
<td>Concern</td>
</tr>
<tr>
<td>Mashuru H.centre</td>
<td>Kajiado</td>
<td>Mercy USA</td>
</tr>
<tr>
<td>Mile 46</td>
<td>Kajiado</td>
<td>Mercy USA</td>
</tr>
<tr>
<td>Mariakani District Hospital</td>
<td>Kaloleni</td>
<td></td>
</tr>
<tr>
<td>Kilifi DH</td>
<td>Kilifi</td>
<td>GOK / KEMRI / Plan</td>
</tr>
<tr>
<td>Kitui District Hospital</td>
<td>Kitui</td>
<td>GOK</td>
</tr>
<tr>
<td>Kavisuni C. Disp</td>
<td>Kitui</td>
<td>Catholic Mission</td>
</tr>
<tr>
<td>Sosian</td>
<td>Laikipia</td>
<td>IMC</td>
</tr>
<tr>
<td>Salama</td>
<td>Laikipia</td>
<td>IMC</td>
</tr>
<tr>
<td>Nanyuki</td>
<td>Laikipia</td>
<td>IMC</td>
</tr>
<tr>
<td>Mukuyuni HC</td>
<td>Makueni</td>
<td>World Vision</td>
</tr>
<tr>
<td>Makueni DH</td>
<td>Makueni</td>
<td>World Vision</td>
</tr>
<tr>
<td>Maralal District Hospital</td>
<td>Samburu Central</td>
<td>World Vision</td>
</tr>
<tr>
<td>Maralal Catholic Dispensary</td>
<td>Samburu Central</td>
<td>World Vision</td>
</tr>
<tr>
<td>Lodwar District Hospital</td>
<td>Turkana Central</td>
<td>Merlin</td>
</tr>
<tr>
<td>Kakwanyang Dispensary</td>
<td>Turkana Central</td>
<td>Merlin / World vision</td>
</tr>
<tr>
<td>Kakuma Refugee Camp (IRC)</td>
<td>Turkana North West</td>
<td>IRC</td>
</tr>
<tr>
<td>SOS</td>
<td>Kamukunji</td>
<td>SOS / Concern</td>
</tr>
<tr>
<td>Lt Kibera</td>
<td>Lea Toto</td>
<td>Lea Toto / Concern</td>
</tr>
<tr>
<td>Pandpier Kisumu Urban Apostolate Programme (KUAP)</td>
<td>Kisumu East</td>
<td>KUAP / Concern</td>
</tr>
<tr>
<td>KMET Obunga</td>
<td>Kisumu East</td>
<td>KMET / Concern</td>
</tr>
</tbody>
</table>

3.4.2 Data Collection Methods

Secondary Data - Desk Review
The evaluation made use of the extensive body of IMAM-related data since 2009. This included a review of the “National Guidelines for IMAM” (2009), pilot protocols, partner agreements, training materials, supervision checklists, databases, nutrition and coverage survey, operational research documents and reporting, treatment and monitoring records. A full list of documents reviewed in this evaluation is presented in the annexes.

Primary Data
Primary data was gathered through qualitative and quantitative methods. Qualitative data was collected using key informant interviews and focus group discussions (FGDs), whilst quantitative data was collected through the use of structured questionnaires. A full list of all data collection tools used for the purpose of this evaluation is presented in the annexes.

Key Informant Interviews
A total of about 55 key informant interviews were held with persons who possess vital perspectives on governance, advocacy and other content of the evaluation based on an initial mapping of key stakeholders. Key informant structured checklists were used to guide data collection. The list of key informants is attached as annex of the report.

Focus Group Discussions (FGDs)
The evaluation held various FGDs with a cross section of groups involved with IMAM. The list and numbers involved are summarised in Table 3.2 below. The FGDs comprised between 5-12 persons and included a guided interaction to assess the participants’ level of
awareness of IMAM and their inclusion in decision making processes relating to project implementation.

3.4.3 Data Collection Tools
Data collection instruments were developed in order to aid in collecting primary and secondary data. These included interview guides for the FGDs, questionnaires for individual interviews and checklists for directly observation. This process involved breakdown of terms of references (TORs) into questions and sub-questions needed to satisfactorily answer the question matched to standards, indicators and methods. This resulted in the following tools:

1. Health Facility Checklist
2. Focus Group Discussion Interview Guide for Community Health Workers (CHWs) and Community Resource Persons (CORPs)
3. Focus Group Discussion Interview Guide for Beneficiary caregivers, and other community members
4. Individual interview guide for Health and Nutrition Programme Managers
5. Questionnaire for Health Facility Workers (Doctors, Nurses, and Other Clinical Staff)

3.4.4 Criteria for Quantitative IMAM Coverage and Performance Data Used
UNICEF and Implementing Partners furnished the team with large datasets from 2009 onwards and in some instances including data for pregnant and lactating mothers and those children below and above 5 years of age. The following criteria were applied when selecting data:

- Reference period between January 2010 and October 2011
- Data for children between 6 and 59 months
- No data for lactating and pregnant women was used
- Only areas covered by UNICEF and partners in arid and semi-arid lands (ASAL) and urban areas were included in the evaluation.

3.4.5 Interviews Conducted
The team met over 55 persons directly and over 100 people indirectly involved in IMAM in Kenya. Table 3.3 gives an overview of informants met at district and national levels. The comprehensive list of persons and their titles consulted is published in the annexes of the report.

3.4.6 Cost Analysis Approach
In Chapter 6 a cost analysis of IMAM is presented. Data collected was disaggregated into either capital or recurrent costing variables (see annexes). Both primary and secondary sources of data were used in the cost analysis. UNICEF provided financial data as allocated to partners on the basis of Programme Cooperation Agreements (PCAs) and budget sheets of all projects funded between October 2010 and December 2011; as well as cost proportion of staff salaries and procurement databases. Information on contribution from WFP in purchase and distribution of RUSF supplements and associated logistical requirements such as cost of transport was provided by WFP staff.

To estimate cost of IMAM for the GoK, primary data was collected from health workers, especially the District Nutrition Officers (DNOs) during site visits and follow-up on telephone. A time allocation template was used to assess staff time per service delivery activity in stabilization centres/inpatient, outpatient and management of the supplementary feeding programme, and associated costs computed as a proportion of their annual salary.

The admission data used for the analysis was provided by UNICEF and covers the period January to December 2011. The cost of medication has been limited to treatment of bacterial infections with antibiotics, deworming and provision of vitamin A, all required in the National Guideline for Integrated Management of Acute Malnutrition. The value of government capital
investments such as buildings, medical equipment and utilities such as gas and water was not quantified and included in the government contribution in the capital cost category.

Due to lack of screening data, the community outreach component has been excluded from the analysis. WFP provided supplements to malnourished children, and to pregnant and lactating mothers. Cost data obtained from WFP is not disaggregated along these categories; however, the analysis is based on the assumption that children are the major beneficiaries.

3.4.7 Quality Assurance
The evaluation report is expected to meet both national and global requirements. Capacity for the data collection process was strengthened through discussion and finalization of the questionnaires and checklists through extensive communications among national and global consultants. The tools were pre-tested by visiting the SOS health centre and Lea Toto in Nairobi. The recorded data were analysed and necessary changes were made in the evaluation tools.

Consultation among the consultants included discussion regarding evaluation tools, interview skills, qualitative data compilation and consideration of ethical issues in relating to people interviewed. The responsibilities of the team members were clarified with regard to coverage of TOR questions and implementation of the work plan. Qualitative information was translated, transcribed and triangulated. Primary and secondary qualitative information was also compared as well as complementing quantitative analyses with qualitative analyses.

The evaluation process and report was assessed on the basis of the UNICEF Evaluation Report Standards (2004) and the Active Learning Network for Accountability and Performance (ALNAP) Pro Forma standards (2001). They both draw on good practice in evaluation of development and humanitarian action, incorporating both recognized evaluation standards and Organisation for Economic Cooperation and Development/Development Assistance Committee (OECD-DAC) evaluation criteria with other cross-cutting issues.

Table 3.3: Overview of Persons Interviewed

<table>
<thead>
<tr>
<th>A</th>
<th>In-depth Interview</th>
<th>Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nairobi</td>
<td>Kajiado</td>
</tr>
<tr>
<td><strong>1</strong></td>
<td>Nutrition Officers (NSOs)-UNICEF</td>
<td></td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>In-charge OTP / SC-MOH staff</td>
<td>1</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Nutritionist..DNO.NGO nutrition partners?</td>
<td>1</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>Nurses</td>
<td>3</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>Clinicians</td>
<td></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td>IMAM monitors and advisors</td>
<td>3</td>
</tr>
<tr>
<td><strong>7</strong></td>
<td>Health and nutrition programme managers-NGOs</td>
<td>4</td>
</tr>
<tr>
<td><strong>8</strong></td>
<td>Implementing NGOS, donors and the private sector</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11</strong></td>
<td><strong>4</strong></td>
</tr>
</tbody>
</table>
3.4.8 Limitations of the Evaluation Methodology

There were a few challenges experienced during the planning, development and implementation of the evaluation and they were addressed as indicated:

- Time and resource constraints for conducting the evaluation limited the ability to capture all relevant information. The time available for data collection at IMAM sites was less than desirable due to the complex logistics involved. Consequently, Makueni district was not visited as planned. However, data collected from other districts were more than sufficient to conduct the analyses.

- The databases provided by to the team were not complete for admissions and performance indicators for different years, and the quality of records was uneven, including missing key data from mainly urban areas. Some data collected therefore may lack reliability and validity. Kisumu and Nairobi data were not complete in the 2010 database as it only captured outpatient treatment data. Data on the supplementary food for MAM management were not available. The team used data sets that were as complete as possible for the analyses and relied on qualitative data to a larger extent. (The problems regarding urban data are being addressed through the Nutrition Technical Forum urban working group.)

- Staff turnover, transfers to other departments and retirements of those involved in the start-up of IMAM created gaps in the information available to the evaluators. For example, most of the health staff (including clinicians, nurses) interviewed were not involved in the initial set-up of IMAM and had less than one year involvement of the activities. Efforts were made to find staff with a longer history in the programme.

- One goal of the evaluation was to evaluate the cost effectiveness of the delivery of the IMAM (e.g. costs of various components). Unfortunately, suitable systems for the ongoing collection for data on cost were limited or were inadequate to make meaningful analyses. Most of the sites visited did not have information on cost of products as well as logistical costs involved. Thus most of the useful information available on cost effectiveness was qualitative in nature (i.e., comments provided during interviews with partners).
This chapter presents findings on effectiveness and quality of services regarding the four IMAM components: Community Outreach, Outpatient Treatment Services for children with Severe Acute Malnutrition (SAM) without medical complications, inpatient care for children with SAM and medical complications, and services for children with Moderate Acute Malnutrition (MAM). This chapter also covers Ready-to-Use Therapeutic Food (RUTF) supply, its transport, storage and acceptability.

The analysis draws on national data and uses a cross district comparison of the performance against recommended indicators/standards, as well as coverage, quality, timeliness and sustainability. Throughout the chapter, a reference period for data spanning 2010 and 2011 is used to extrapolate performance data. Data from 2011 is also examined as it represents a specific emergency response period in the food security crisis which had increasing impact throughout 2011. For the Kakuma refugee camp, available data from January 2011 was used. The evaluation referred to performance targets set out in the Kenya Nutrition Sector Emergency Response, July 2011.

### 4.1 Community Outreach

The Ministry of Public Health and Sanitation (MoPHS) is implementing the Community Strategy (Taking the Kenya Essential Package for Health to the Community: A Strategy for the Delivery of Level One Services) which shifts more responsibility for preventive health interventions (e.g. nutrition, immunizations, malaria prevention, improved sanitation) to communities through training and supporting volunteer community health workers (CHWs), developing community reporting and feedback systems, and linking CHWs with local health facilities.

The Community Strategy reaffirms the guidance set forth in the “National Guidelines for Integrated Management of Acute Malnutrition (IMAM)” (MOH, 2009) where “Community mobilization” is a term used to cover a range of activities that help nutrition services implementers (i.e. nutritionists, managers and health workers) build a relationship with the community and foster use of nutrition support by the community.

#### 4.1.1 Screening

As per the national guidelines, the CHW identify children at risk with anthropometric measurements (e.g. MUAC) or where oedema is evident. Screening is typically conducted at two levels, community and at the health facilities and active case finding is integrated within the health service delivery package. For example, in the Integrated Management of Childhood Illness (IMCI) and Mother and Child Health (MCH) initiatives nutritional screening using MUAC is also done routinely.

The Nutrition Sector set a target of ≥ 70% for acutely malnourished children < 5 years and pregnant and lactating women (PLW) screened and referred for management of malnutrition. Data was not available or was inconclusive regarding screening numbers in both cumulative ASAL calculations (UNICEF’s data analysis) and analysis for the evaluation reference districts. Data collection is difficult due to heavy health worker workloads and the integrated nature of the screenings where children are screened at various entry points. Overall coverage rates (see Outpatient Treatment of SAM below) indicate that screening does not reach all children in order to identify the malnourished among them and this was verified through qualitative discussions.

The screening for IMAM is nearly always conducted using Mid-Upper Arm Circumference (MUAC) and checking for bilateral oedema as indicators for referral. The screening through MUAC is based on the WHO revised growth standards that included MUAC <11.5 mm,
bilateral pitting oedema and W/H Z-scores. The identified children are referred to a health facility where diagnosis is the responsibility of the health staff as per the nutrition guidelines. Screening was carried out by the CHWs in all the sites visited except in Kajiado and Kitui district hospitals which do not have CHWs actively involved in the IMAM activities. In Turkana and Kajiado, NGO staff involved in the outreach activities also conducts screening during the outreach days. In the refugee and IDP camps, mass screenings are carried out periodically.

Various screening strategies are used in the different sites as indicated in Box 4.1. Screening is generally performed routinely in the community by the CHWs and at the Mother Child Health (MCH) clinics. It is also conducted during food security and nutrition surveys. In the Nairobi slums, the CHWs walk from house to house aiming to screen all the children. Similarly, in the Kakuma refugee camp, community health promoters (CHP) work on a daily basis referring all cases to outpatient treatment facilities (OTPs).

**Box 4.1 Screening and Referral process**

“*We go door to door twice a month, use the MUAC tape to identify those malnourished and by also general observation of the child. We issue a Lea Toto card to the identified child and mainly those who are HIV positive. The others identified, we refer them to the Langata GOK health center. We have a person we liaise with at the centre*”. CHW, Lea Toto Clinic, Nairobi.

“We have blocks that each of us is in charge of. We move from one house to another within the blocks on a weekly basis and using MUAC tapes we identify the malnourished children and refer them to a health facility using some books that we write for them”. CHP, Kakuma refugee camp.

“We screen them at the community, those we identify we request the care givers to bring them at the health facility where we wait for them and weighing is done by the health worker”. CHW at Maralal district hospital.

“We screen using MUAC tapes at the Early Childhood Centers (ECD) in schools because the homes are far apart, so we capture mainly those who are above 3 years. Those that are younger are expected to be attending growth monitoring at the health facility”. CHW at mile 46.

“The CHWs walk from house to house doing screening of all children in the slum area. Those identified as malnourished are referred to the clinic for admission to either the ‘plumpy nut’ (OTP) or ‘uji’ (SFP) programs. Other malnourished children are identified by beneficiaries and friends who refer them to the clinic.” Caretaker/beneficiary Lea Toto.

“Most of the children are identified through CHWs.” Caretakers/ Beneficiaries Lodwar DH.

Interviewees mentioned some reasons that not all children are screened.

- The community strategy is not completely rolled out in some communities.
- There are vast areas, for example, in the Nairobi slums, Turkana and Wajir, and the CHWs cannot cover the entire area.
- There is always a continuous migration (both in and out) of the slums.
- Some mothers choose to take their children to traditional healers.
- In the districts, particularly large geographical and sparsely populated areas, the main constraint is distance from a health facility; mothers cannot afford transportation to the clinics for screening.
- Information about IMAM and screening opportunities may be inadequate in some distant villages.

**4.1.2 Referrals and Admissions**

The National Guidelines for IMAM clearly outline that after screening, the malnourished children are referred to a health facility for diagnosis and determination of appropriate treatment. As an example of site procedures which might indicate need for strengthening of the protocols, in the LEA Toto clinic in the Nairobi slums, a clinic which serves largely HIV
positive children, CHWs use cards to refer children. Those identified as malnourished but HIV negative are referred to a government owned health facility but with no card. At the health facility, SAM cases with no complications are referred to an outpatient treatment facility while those with complications are referred to an inpatient treatment facility. Children with MAM are registered in a supplementary feeding programme where available. The CHWs however do not record the number of children they refer.

During the period January to September 2010, 18,509 SAM cases and 79,183 MAM cases had been admitted into therapeutic and supplementary feeding programmes in the ASALs. (See Figure 4.1). Compared to the same period in 2009 this indicates a 52.3% increase in children admitted with acute malnutrition. The increase is attributed to increase in coverage, outreach and adoption of new WHO guidelines, which increased the parameters for admission to the IMAM.

Figure 4.1: Trends in admission of SAM children for the years 2009, 2010 and 2011 in the ASAL

Dramatically elevated admission levels in 2011 were attributed to food insecurity experienced during the drought related emergency in 2011. The numbers of admissions significantly exceeded nutrition survey estimates indicating emergency levels of malnutrition in some districts. Samburu which had the least number of children under 5 years of age had the highest malnutrition rates. Kilifi and Kitui districts had the lowest MAM rates which were below 10%.

Interviewees identified the following problems in caretakers reporting for referral and admission, most of which point to need for more community sensitization and coordination.
- Caregivers of the children identified as malnourished sometimes do not make it to the health facility as referred because of the distances to the health facility and frequent migrations of the pastoral communities in Kajiado and Turkana especially during the drought.
- Some people who belong to religious organizations do not allow children to be taken to health facilities but instead they are prayed for.
• Lack of understanding of childhood development and the health implications of poor nutrition may occur especially for mothers who are illiterate, which was evident in Ganze in Kilifi district.
• In Kakuma refugee camp, the MAM cases receive SF that duplicates what they receive during the general food distribution, therefore some mothers opt not to collect their SFP ration.
• Some will use traditional healers especially in Kilifi and Kisumu before they opt to use the hospitals.
• Some people who do not come to the IMAM sites are afraid of stigmas related to HIV and poverty. In Lea Toto, which serves HIV positive children, some interviewees thought that all children identified as malnourished should be registered instead of only targeting the HIV positive. The inclusion of all malnourished will help to reduce the stigma associated with bringing HIV positive children to the centre.
• Some do not have time to come to the clinic due to time commitments at work or business.38

4.1.3 Household Visits and Follow up
The National Guidelines for IMAM states that CHWs should conduct home visits on a regular basis. According to the discussions held with CHWs and community leaders, the CHWs provide health education in the form of health talks in the household or the health facility. The health talks include nutrition education, monitoring nutrition status of children under five years of age and referring malnourished to a health facility, hygiene in the home and prevention of HIV/AIDS and living with HIV. They also encourage mothers to ensure that their children are fully immunized and attend MCH on a weekly basis to monitor malnourished children and for RUTF distribution.

Through the interviews, it was clear that the CHWs and caregivers were aware that both medical and community based follow ups are important for recovery and the prevention of default. However, the majority of the community members especially the fathers in almost all the sites were not aware of the problems associated with malnutrition. Traditionally, men think that it is a woman’s duty to take care of children. Furthermore, they have not received enough health education.

With the help of the health workers in the health facilities, mother support groups have been formed in the sites visited to support IYCN. These groups assist to reduce cases of defaulters and ensuring that recovered children do not slide back into SAM. The mothers are trained at the health facility and some of the groups have a “merry go round” economic support group and income generating activity.

The following reasons were mentioned by CHWs for not performing household visits and follow up.
• Despite their inclusion in the Community Strategy, there is a lack of operational recognition by the GoK regarding the critical role played in the community strategy by the CHWs.
• CHWs need proper remuneration for the outreach activities.
• There are limited training opportunities.
• Pastoralist communities migrate frequently, therefore tracking the beneficiaries is difficult.

38 The Comprehensive Food Security and Vulnerability Analysis (CFSVA) and Nutrition Assessment in Kenya High Density Urban Areas, Government of Kenya, World Food Programme, Food and Agriculture Organization (FAO), and FEWSNET, 2010, executive summary noted that both Nairobi and the Agro-pastoralist zones have a high proportion of households engaged in poor, casual labour livelihood strategies, and and few households engaged in food production. Both factors were associated with a lower food consumption score (FCS).
4.1.4 Community Sensitization and Mobilization

The community mobilization process has two phases and five essential steps as shown in the figure below. According to CHW interviews, through the community strategy, the CHWs receive a one week training in screening for malnutrition, nutrition education that includes high impact nutrition interventions, water and sanitation and family planning. However CHWs also receive some training as need arises relative to programmatic goals and objectives. Some of most effective ways to disseminate messages include clinic visits, community outreach activities, mass communication through radio and seminars, e.g. to educate refugees or IDPs who are living in camps. Some community leaders interviewed mentioned that “any children of the village now can be treated easily for malnutrition and are much healthier and grow better than before”.

![Community Mobilization Process Diagram](image)

**Figure 4.2: Process of Community Mobilization**

The dissemination of nutrition messages occurs through health talks and counselling that is mainly given by the CHWs and health workers for MAM and SAM caretakers. However this is not adequate as it is not individualized and is also limited as there are few health staff especially at the health centres and dispensaries and they are in charge of IMAM as well as other health facility duties.

The GoK officially recognizes the roles played by the CHWs in the health sector and fully acknowledges them as agents of positive changes toward achieving the MDGs and other strategic goals. However, those that are volunteering require some motivation in terms of basic pay or incentives. In some areas of Kenya, the CHWs are supported through economic stimulus packages.

4.2 Outpatient Treatment of SAM

According to the National Guidelines for Management of Acute Malnutrition, a child is admitted into an OTP after an assessment of weight and height and calculating the Z-score; confirming that the child has a good appetite by conducting an appetite test; and confirming that there are no medical complications as well as absence of severe or moderate oedema.

The outpatient treatment of SAM aims for a more widespread access to treatment primarily by establishing the appropriate facilities and activities within or closer to more communities. Generally, the MoH has positioned one District Nutrition Officer (DNO) per district, and there is also a hospital nutritionist working under the MOMS. Additional technical support is provided by IPs. In most of the outpatient treatment sites visited nurses complained about being often extenuated to perform most of the IMAM work and also attend to other patients, since only nurses are authorized to provide some of the IMAM services such as administration of deworming pills, antibiotics and Vitamin A.
4.2.1 Geographic Coverage and Treatment Coverage

The coverage of programmes (i.e. to what extent they are reaching all the children in need) is one of the most critical indicators of success. The discussion of coverage is based on two aspects of coverage: geographical coverage of health facilities providing outpatient treatment for SAM compared to the total number of existing health facilities, and treatment coverage of SAM and MAM cases compared to the need. The following discussion indicates the need for treatment coverage surveys as geographic coverage is less than optimum, screening data is inconclusive and therefore it is not known whether acutely malnourished children are being found and admitted. Coverage methodology has been agreed in 2012 and coverage investigation is now being rolled out.

UNICEF’s Global CMAM Mapping Update (2011) indicates that approximately half of the countries (28 countries - 46%) were able to respond to questions pertaining to geographic coverage based on the existence of services at health facility level, although abilities to track the geographic coverage are markedly increasing. Of this sample, the mean geographical coverage is 33%. The evaluation geographic coverage analysis of outpatient facilities was very limited and somewhat inconclusive as some data were missing (Kilifi, Kisumu and Nairobi). There is a wide range between counties; Kinango, Yatta, Kitui and Laikipia have 10-20% coverage. Table 4.1 shows that geographic coverage for SAM in health facilities averages 44.7% for the five districts having sufficient data after two years of implementation.

### Table 4.1: Outpatient Geographic Coverage and SAM Treatment Coverage (2010 – 2011)

<table>
<thead>
<tr>
<th>District</th>
<th>Number of Functional health facilities</th>
<th>Number of Facilities offering Outpatient Treatment</th>
<th>Geographic Coverage of Outpatient (%)</th>
<th>SAM Treatment Proxy Coverage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samburu</td>
<td>49</td>
<td>38</td>
<td>77.6</td>
<td>83.6</td>
</tr>
<tr>
<td>Turkana</td>
<td>132</td>
<td>66</td>
<td>50.0</td>
<td>102.6</td>
</tr>
<tr>
<td>Kitui</td>
<td>119</td>
<td>39</td>
<td>32.8</td>
<td>104.8</td>
</tr>
<tr>
<td>Kilifi</td>
<td>72</td>
<td>25</td>
<td>34.7</td>
<td>30.5</td>
</tr>
<tr>
<td>Kajiado</td>
<td>172</td>
<td>78</td>
<td>45.3</td>
<td>92.2</td>
</tr>
<tr>
<td>Laikipia</td>
<td>85</td>
<td>15</td>
<td>17.6</td>
<td>74.4</td>
</tr>
<tr>
<td>Kisumu</td>
<td>95</td>
<td>22</td>
<td>23.1</td>
<td>-</td>
</tr>
<tr>
<td>Nairobi</td>
<td>500</td>
<td>80</td>
<td>16.0</td>
<td>-</td>
</tr>
</tbody>
</table>

Treatment coverage surveys are important to collect evidence on the percentage of children who gained access to IMAM as well as to identify children that IMAM has not reached. They can also help to identify areas of probable low and high coverage, and reasons for coverage failure. Treatment coverage surveys in Kenya were limited to several conducted by IPs in their areas of operation. Treatment coverage methodology has been agreed among partners in 2012 and coverage investigation is now being rolled out.

40 UNICEF agreed definitions: Geographical coverage = PHC facilities delivering CMAM services/total PHC facilities. Treatment coverage = cases treated/need; Need = Population 6-59m* x [Prevalence + (Prevalence x 1.6)].
42 Data does not include outreach for children without access to functional health facilities.
43 Values calculated using Ministry of Health Master Health Facility List for existing health facilities; UNICEF database (2011 New Database 19th October) for number of existing OTPs; 1World Vision, Nutrition survey June 2010; 4ACF,Proxy computation (July 2010); 5FHK Nutrition Survey, June 2010.
44 Initial coverage in Laikipia was just for ASALS and not all of the district.
UNICEF’s analysis of treatment coverage for January to September 2011 indicated approximately 93% coverage; cumulatively 45,176 children with SAM in the drought affected ASALs were admitted by September out of an expected 48,753. The nutrition sector target was set at approximately 70% of the expected burden; thus admissions exceeded the cluster target (36,565) and by June of 2011 exceeded the expected caseloads.\footnote{Cumulative Admissions of Severely Malnourished Children Vs expected caseload and cluster target in Drought Affected Arid and Semi Arid Lands (ASAL) – Jan-Dec 2011, Kenya Nutrition Information, UNICEF, September 2011.}

4.2.2 Performance of Outpatient Treatment of SAM

The averages in the sampled districts met Sphere standards for treatment of SAM. Out of the total of 111,336 discharged children over the period between 2010 and 2011, 81% recovered, 1.5% died, and 13% defaulted (Table 4.2). The average length of stay was 59 days with a relapse rate at 3%. This data confirms the general success of outpatient care. The average weight gain data was not available, although the national guidelines advise weighing the patient and plotting the weight on a multi-chart. The national guidelines mention performance standards and include mean weight gain as 5 and 10 grams per Kg of body weight per day. It is not known whether the district health information system collects and analyzes this information.

Despite the averages, some districts did not meet the Sphere standards. Kisumu had the poorest performance in recovery and default rates (at 73.7% and 17.3% respectively). Nairobi had a default rate of 19.3%. For length of stay (LOS), Kitui (71.4 days), Kajiado (85.2), Laikipia (97.8) and the Kakuma refugee camp (69.5) had stays above the recommended 60 days. The high default rates were explained partly by weak household follow-up, whereas the longer LOS was often due to social pressures from parents and community members who wanted children to benefit from the RUTF as long as possible. Inadequate tracking of weight gain is an additional reason.

<table>
<thead>
<tr>
<th>District</th>
<th>Recovery Rate</th>
<th>Death Rate</th>
<th>Default Rate</th>
<th>Relapse Rate</th>
<th>Average length of stay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 75%</td>
<td>&lt; 10%</td>
<td>&lt; 15%</td>
<td>&lt; 60</td>
<td></td>
</tr>
<tr>
<td>Turkana</td>
<td>86.7</td>
<td>1.0</td>
<td>6.9</td>
<td>5.4</td>
<td>51.8</td>
</tr>
<tr>
<td>Samburu</td>
<td>84.1</td>
<td>0.7</td>
<td>8.4</td>
<td>5.4</td>
<td>29.9</td>
</tr>
<tr>
<td>Nairobi</td>
<td>75.4</td>
<td>1.9</td>
<td>19.3</td>
<td>3.1</td>
<td>47.8</td>
</tr>
<tr>
<td>Kitui</td>
<td>84.5</td>
<td>0.6</td>
<td>12.0</td>
<td>2.5</td>
<td>71.4</td>
</tr>
<tr>
<td>Kilifi</td>
<td>82.4</td>
<td>0.0</td>
<td>10.4</td>
<td>0.8</td>
<td>53</td>
</tr>
<tr>
<td>Kajiado</td>
<td>80.9</td>
<td>2.2</td>
<td>14.4</td>
<td>3.6</td>
<td>85.2</td>
</tr>
<tr>
<td>Kisumu</td>
<td>73.7</td>
<td>5.2</td>
<td>17.3</td>
<td>3.3</td>
<td>31.2</td>
</tr>
<tr>
<td>Laikipia</td>
<td>77.8</td>
<td>0.6</td>
<td>14.2</td>
<td>1.5</td>
<td>97.8</td>
</tr>
<tr>
<td>Overall</td>
<td>80.7</td>
<td>1.5</td>
<td>12.9</td>
<td>3.2</td>
<td>58.5</td>
</tr>
<tr>
<td>Kakuma Refugee camp</td>
<td>93.2</td>
<td>0.0</td>
<td>5.2</td>
<td>-</td>
<td>69.5</td>
</tr>
</tbody>
</table>

4.2.3 Capacity of Outpatient Facilities for Treatment of SAM

A pre-validated checklist was used to assess the capacity of 11 outpatient facilities treating SAM and also providing supplementary foods for MAM cases. The findings were generally positive. All health facilities had necessary equipment and tools (height boards, weight...
scales, MUAC tapes, equipment for clinical examination of children, anthropometric tables) in good working condition. Also present were registration forms, formats and guidelines which were well maintained in all facilities. There were adequate supplies of RUTF and essential medicines apart from two types of drugs that had a 50% chance of being out of stock in the sites visited. These included folic acid tablets and oral rehydration solution (found in 6 of 11 sites).

Other positive findings on health facility activities include the following:
- All the visited sites were in generally well organized, with good crowd management.
- The health workers were helpful and had positive attitudes with caretakers.
- Children were correctly weighed; the height and the grade of oedema (if present) were measured.
- Admission and discharge of children was performed as defined by the national protocol.
- All information and data per child was well recorded in OTP registers.
- Caretakers received medicines and RUTF, as well as information on how to administer them.

Some of service quality issues included the following:
- Only 3 out of 11 health facilities knew of or were in possession of Integrated Community Case Management (ICCM) and Integrated Management of Neonatal and Childhood Illness (IMNCI) protocols. (The GoK is currently updating the ICCM manual.)
- Many health workers in charge complained about their heavy workload and need for additional staff, an issue which the MoH is addressing.
- The aspect requiring the most strengthening was nutrition counselling/education; health workers mentioned lack of time to dedicate this activity.

Health workers and managers mentioned good practices that will lead to a long term impact and sustain the programme. These included:
- Integration of activities resulting in enhanced health system ability to identify and accurately classify malnourished children.
- Monthly outreach activities improving treatment coverage.
- IMAM beneficiaries also being targeted in the food security and livelihood programmes, e.g. by Concern Worldwide.
- Mother to mother support groups with positive outcomes in dealing with issues of stigma through group counselling and interactive discussions.
- Demonstrations on how to mix complementary foods.

4.3 Inpatient care for Children with SAM and Medical Complications
Inpatient services for children with SAM and medical complications are provided in a district or sub-district hospital (preferably in a pediatric ward). (These facilities are often termed Stabilization Centres - SCs in other countries.) Admission criteria includes W/H < -3 Z-score; MUAC < 11.5 cm for children 6 to 59 months of age, and moderate or severe bilateral oedema. It also includes children without appetite and/or with major medical complications. If there is limited or no community capacity to handle outpatient treatment of severe acute malnutrition, and only inpatient care is available, children with SAM are admitted to inpatient for Phase 1 nutrition. In many of the settings in Kenya, HIV testing or Diagnostic Counselling and Testing (DCT) is performed on admission for early staging of HIV and AIDS disease progression and readiness for pediatric anti-retroviral treatment (ART) care. During the transition phase of treatment, the F75 is replaced with F100 or a locally formulated milk of the equivalent nutritional value.
4.3.1 Capacity of Inpatient Treatment Facilities

All inpatient treatment facilities are established in district and provincial hospitals staffed by Medical Officers, Paediatricians, Nutritionists, Nutrition Assistants or nurses and supporting staff. The inpatient treatment facilities visited were in separate rooms either in the paediatric or inpatient wards for females. All were well supplied with F-75 and F-100 milk and medicines and the registration forms and formats were well placed and managed.

In terms of accessibility, all the inpatient treatment facilities were established in central locations that were easily accessible to all but the furthest outpatient facilities. The cost of transportation and time to reach the inpatient facilities were the impediments faced by caretakers. Some health workers complained about performing SAM treatment in addition to other health care activities. On the Job Training (OJT) has played a role in improving the performance of the health facility staff in the inpatient treatment facilities apart from Kilifi where it has not been implemented. All the inpatient facility staff directly involved in the management of malnourished children received training in IMAM.

4.3.2 Activities Performed in the Inpatient Facilities

In the IMAM inpatient facilities, the knowledge and skills of the Nutrition Assistant/Nurse were appraised in terms of maintaining and performing admissions, medical and nutrition protocols, follow-up visits, discharge and transfer protocols, counselling, documentation and reporting. Almost all the children admitted at the inpatient facilities were received from the Outpatient Department (OPD) of the hospitals. During their stay, the SAM cases were treated by following the WHO “Guidelines for the inpatient treatment for severely malnourished children” (2003). After stabilization, they were discharged; their caretakers were given nutrition advice and advised to bring their child back to the hospital for a check-up. Although the hospitals were offering excellent nutrition services, there was no formal follow-up system to check the status of discharged children. This may result in the many relapses seen in some districts.

4.3.3 Performance of the Inpatient Facilities

Out of a total of 3,414 admitted cases to inpatient treatment facilities during the reference period, around 85% were stabilized and documented as recovered and transferred to outpatient facilities. Deaths were 8.7%, 1.4% defaulted, 6.1% relapsed, and on average stayed for 8.4 days (Table 4.3). The quality of implementation of the inpatient treatment facilities overall was good in the evaluated districts. There were however 2 districts that performed below the Sphere standards: Kisumu and Kitui district. Kisumu had very low recovery rate of 55.1% coupled with high death rate of 32%. Kitui had a death rate of 13.2%

Table 4.3: Performance of Inpatient Treatment for SAM with Medical Complications

<table>
<thead>
<tr>
<th>District</th>
<th>Recovery rate</th>
<th>Death rate</th>
<th>Default rate</th>
<th>Relapse rate</th>
<th>Average length of stay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 75%</td>
<td>&lt; 10%</td>
<td>&lt; 15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphere Standards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkana</td>
<td>93.6</td>
<td>4.7</td>
<td>0.5</td>
<td>1.1</td>
<td>6.2</td>
</tr>
<tr>
<td>Samburu</td>
<td>91.1</td>
<td>2.8</td>
<td>0.4</td>
<td>8.3</td>
<td>3.9</td>
</tr>
<tr>
<td>Nairobi</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitui</td>
<td>80.8</td>
<td>13.2</td>
<td>0.0</td>
<td>1.7</td>
<td>7.5</td>
</tr>
<tr>
<td>Kilifi</td>
<td>76.8</td>
<td>7.7</td>
<td>2.1</td>
<td>18.4</td>
<td>15.8</td>
</tr>
<tr>
<td>Kajiado</td>
<td>96.5</td>
<td>3.2</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>55.1</td>
<td>32.0</td>
<td>8.6</td>
<td>64.6</td>
<td>8.7</td>
</tr>
<tr>
<td>----------------</td>
<td>------</td>
<td>------</td>
<td>-----</td>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>Kisumu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laikipia</td>
<td>83.4</td>
<td>6.0</td>
<td>0.0</td>
<td>6.9</td>
<td>9.3</td>
</tr>
<tr>
<td>Overall</td>
<td>84.6</td>
<td>8.7</td>
<td>1.4</td>
<td>6.1</td>
<td>8.4</td>
</tr>
<tr>
<td>Refugee camp</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4.4 Services for Children with Moderate Acute Malnutrition (MAM)

In Kenya, the management of moderate acute malnutrition (MAM) is linked to national health strategies and are incorporated into Mother and Child Health (MCH) interventions which form part of the primary health-care package. Services include supplementary feeding, nutrition counselling, and treatment of common ailments at the health facility (or centres designed to manage individuals that are moderately malnourished or at risk) which is also part of the IMAM national guideline.

The main objectives for MAM management are to cure moderate malnutrition and to prevent children from becoming severely malnourished. The supplementary foods are largely distributed to vulnerable groups free of charge, through "take home" rations which require less frequent attendance, fewer dispensaries and health centres, and fewer personnel. Interviewees confirmed that the supplementary foods have helped improve the nutritional status of malnourished children. The beneficiaries, CHWs and the health workers agreed that nutrition counselling is important but more effective when there is supplementary food especially during times of drought. However, they feel that there is need for a protection ration for the family to reduce the sharing that is common in most households as numbers of malnourished cases increase significantly during the drought period when most households do not have food.

4.4.1 Treatment Coverage for Children with MAM

The analysis from 2011 indicated an increase in caseloads of MAM in 2011 in the drought affected ASALs compared to 2010 and 2009. Cumulatively throughout 2011, 52% (124,176) of moderately malnourished children were admitted against an expected caseload of 239,123 for the period Jan-September 2011. Nutrition sector targets aimed at approximately 50% of expected cases. Cumulatively, over 100% (124,176) of moderately malnourished children were admitted against the cluster target of 119,912 by September 2011.

Most of the sampled districts reported a treatment coverage rate of above 50% when comparing the total cases of MAM admitted to the number of children in need. (Turkana district contributed nearly half of the number of MAM cases admitted.) In summary, the sampled districts (with the exception of Nairobi) had 564,833 admissions for MAM management. Two districts (Kilifi and Laikipia) had coverage of less than 50% representing the poorest treatment coverage of MAM. A probable contributing factor in Laikipia is the relatively new IMAM (less than one year) and limited presence of the MoH and IPs. Kilifi’s IMAM was managed without NGO support and lacked adequate capacity in supervision and logistics.

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Figure 4.3: Cumulative Admissions of Moderately Malnourished Children versus Expected Caseload

4.4.2 MAM Management Performance

The chart above (Figure 4.4) indicates the trends in cumulative admissions for the time period January to December 2011. Table 4.4 indicates MAM performance over the evaluation period of the sampled districts, from January 2010 to December 2011. Despite the large number of admissions, MAM management in the sampled districts on average met the Sphere standards. The average length of stay (LOS) was computed for the available data of only four districts. Some interviewees mentioned that LOS, as well as weight gain, was very difficult to record and track due to lack of staff time for recording this data. The LOS was too high in Kitui and Kajiado.

Table 4.4: MAM Management Performance as Per Sphere Standards from 2010 and 2011

<table>
<thead>
<tr>
<th>Sphere Standards</th>
<th>Recovery Rate (%)</th>
<th>Death rate (%)</th>
<th>Default Rate (%)</th>
<th>Relapse Rate (%)</th>
<th>Average length of stay (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovery Rate</td>
<td>Death rate</td>
<td>Default Rate</td>
<td>Relapse Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkana</td>
<td>83.5</td>
<td>0.2</td>
<td>10.1</td>
<td>4.1</td>
<td>63.4</td>
</tr>
<tr>
<td>Samburu</td>
<td>86.4</td>
<td>0.2</td>
<td>7.5</td>
<td>3.3</td>
<td>-</td>
</tr>
<tr>
<td>Kitui</td>
<td>82</td>
<td>0.7</td>
<td>16.2</td>
<td>0.7</td>
<td>90.8</td>
</tr>
<tr>
<td>Kilifi</td>
<td>53.9</td>
<td>1.2</td>
<td>34.2</td>
<td>2.4</td>
<td></td>
</tr>
</tbody>
</table>
### 4.4.3 Alternatives for Managing MAM

The integration of the outpatient treatment for SAM and management of MAM within the other primary health care services has helped to adjust the perception of health workers who initially considered nutrition as a parallel service to health. However, the supplementary food distribution has caused dependency among some beneficiary families and some use it as a source of income. In some districts, caretakers walk long distances to collect rations and while the intervention contributes to the health of the child, the time taken may detract from other activities such as income generation. Further the government’s funding ability is still constrained in terms of making the intervention sustainable.

According to interviewees, developing a long term strategy to address MAM is a high priority. It was thought that the most effective means is to improve food security and use community resources to improve local production. This will also reduce dependency on the ration and prevent cases of malnutrition which may reduce vulnerability in emergency periods. For example, the K-MET has started the production of its own supplementary flour. The ingredients are obtained from farmers who are group members hence are empowering them.

The World Food Programme (WFP) provides ready to use supplementary foods (RUSF) and Super Cereal Plus (with powdered milk and micro nutrients) for a large supplementary feeding programme (SFP) which serves over 100,000 including refugees, PLW and children under five years of age. (The WFP SFP serves UNICEF supported interventions in 80% of the sites, the government or NGOs may provide the remainder of the supplementary foods.) The RUSF has improved the operational aspects of MAM management as it is easy to transport and store compared to less concentrated formulas; the reduction is from 200gms/child/day to 92gms/child/day. However, there have been some pipeline breaks without sufficient buffer stocks and issues with product quality that have interrupted distributions.

The WFP provides a blanket supplementary feeding distribution (BSFP) when GAM is > 25% in northern Kenya. WFP uses other strategies for strengthening overall food security including the voucher programme, depending on the local market supply, and cash programmes, which are the most preferred approaches for some donors (e.g. EC, USAID) and it is possible that these may be viable alternatives to the SFP. The usage of the local market was seen to create a “tipping point” which helped to bring local supply and demand back into balance. Some suggestions from CHWs, community leaders, health facility workers and managers on alternatives of the supplementary foods in the management of MAM are contained in Box 4.6.
Box 4.2: Alternatives for Management of MAM

“Establish a community store that can be used to consolidate food during harvest and then training on how they can process the nutritious flour for preparing porridge. This is because there is plenty of harvest when we have received rains but storage is the problem so a lot of food is sold at a throw away price and people do not have food after a few months.” CHW, Kavisuni-Kitui.

“Using support groups that can plant crops either for consumption or trade it to get money to buy other types of food or necessary items. They should be encouraged to practice urban gardening.” CHW, Magadi-Kisumu.

“Turkana is very productive with irrigation. FAO started irrigation projects in 1973 and cowpeas, green grams and sorghum were doing very well. Later maize was planted and also production of oranges, mangoes, groundnuts and dates was started and was doing so well and products were sold even in Nairobi. The project collapsed later because of poor management. This shows that we can have food in the region and not continue to depend on food aid. An alternative for MAM is possible in areas where irrigation can be done.” Community Resource Person, Turkana.

“Groups should be trained and leaders be involved so that they can identify land as the land is communally owned. Money used to transport food can be used to improve crop farming and enhance food security in the area as the area is very fertile. This will reduce dependence on food aid.” Community leader, Maralal-Samburu.

“In 2006, we used locally available cereals and pulses to make a flour for preparing porridge comprised of omena, maize, green grams, ground nuts etc. This was good because a mother could prepare enough to feed the whole family. This should be improved and mothers trained to prepare their own flour.” CHW Kilifi.

4.5 RUTF Acceptability and Supply

Currently most of the RUTF used in Kenya is Plumpy-Nut®, a commercial product of Nutriset. Other products from South Africa have been used and at times BP 100 was used in Turkana district. The use of locally produced RUTF has been limited due to quality assurance issues, cost of production as well as the quality of individual ingredients in making the RUTF. (See Chapter 6 for further discussion.) Most RUTF supply chain activities by the Ministry of Health (MoH through the Ministry of Public Health and Sanitation, MoPHS) are conducted at the district level, with coordination and oversight from the national-level MoH. This includes information collected from districts to delivery directly to the districts.47

A key challenge in implementing IMAM is ensuring the availability and quality of RUTF in a timely manner and in the locations where it is needed. The main issues around this are expansion of demand but slowly growing supply within the country; ensuring the safety and quality of locally produced RUTF; the high dependency of RUTF procurement on emergency funding, which is short term, limiting capacity building efforts. A World Bank loan to the GoK was approved in November 2011 for procurement of RUTF. The GoK covers the structural costs.

4.5.1 Acceptability and Efficiency of Use of RUTF

RUTF has been shown to be a very effective therapeutic food in the rehabilitation of children with SAM, and facilitates home-based therapy of these children.48 Interviewees, including staff and caretakers, confirmed that RUTF is generally well accepted by the beneficiaries and it is viewed it as an effective intervention in treatment of SAM. RUTF is also accepted by staff as it is quick to dispense, there is no need for preparation as in the case of milk.

“Children like it because it is sweet, it also assists them recover faster”: Refugee mother whose second child is a beneficiary.


Health workers stated that sharing of RUTF among siblings and other non-admitted children negatively affects IMAM outcomes, leading to non-compliance and relapse and longer length of stay. This may be addressed by linking other members of the affected households to general food distributions, and to other interventions such as IYCN where inclusion of fathers and extended family such as grandparents in the sensitization, counselling and treatment is encouraged.

4.5.2 Supply, storage, and delivery mechanisms

The supply and delivery system for RUTF and other imported items is co-managed by the GoK with UNICEF and IPs, while the GoK manages supplies for other sectors, such as vaccines and HIV drugs. According to some donors, the health supply and delivery system requires more capacity development to meet the high standards imposed by donor countries for accountability; at present it is heavily dependent on UNICEF for resources and supply management systems. The current system has been successful in the sense that there have been no significant stock outs of RUTF for the last two years, but it is not sustainable.

Many stakeholders play a role in getting RUTF into the hands of the children who need it. Supply starts with health facilities assessing how much RUTF will be required for the coming year in their areas of operation and placing orders. Requests to the UNICEF Supply Division through the UNICEF Kenya Country Office come on a quarterly basis from the District Nutrition Officers (DNOs).

After manufacturing overseas, the RUTF is transported via sea to the port of Mombasa or by air to Jomo Kenyatta International Airport. On arrival in Kenya, the supplies are transported by trucks and stored in the UNICEF warehouse in Nairobi. From there, the Ministry of Public Health and Sanitation works with the UNICEF Country Office to release RUTF for distribution to the districts, where the DNO and/or partners store RUTF until it can be used. UNICEF pays for transport costs from the port of Mombasa or airport to Nairobi and to districts warehouses. In 2010, Kenya was fifth among the top ten recipient countries of RUTF, led by Niger, Ethiopia, Chad and Southern Sudan; 924 metric tonnes (about 70,000 cartons) up from 526 metric tonnes in 2009 of RUTF were imported by the end of September 2010 for the benefit of almost 44,000 children with SAM.

Although DNOs take the lead in delivering RUTF to OTP sites, when necessary, the health facilities treating SAM come for their supplies from the district stores. The evaluation found no major cases of stock outs in the sampled sites. Most respondents indicated receipt of a regular supply of RUTF. The few shortages reported were related to issues such as poor road networks, limited means of transport and inadequate storage space which remain challenges in efforts to make available RUTF whenever and wherever needed, especially in the ASALs. Implementing partners assist in easing need for storage space, for example, by procuring containers. Especially, when it rains the already dilapidated roads become impassable, making it impossible to access facilities to deliver supplies.

“When it rains, Kakuma Refugee Camp is impassable through the nearest entry point. We invest more on transport and time to deliver supplies to the camp”. Key informant, Kakuma.

“Our partners, especially the NGOs greatly assist us with means of transport, however, at times it is a challenge when they make it available at their convenience, and I feel helpless since I don’t have a car. At times we use the one given to the District Medical Officer of Health. It is the same case with storage facilities, currently we are using the completed but

yet to be occupied DMOH office, I don’t know what will happen when the office is occupied”. Key informant, Kitui.
CHAPTER 5: CROSS-CUTTING ISSUES

In this chapter, strategies and principles which support IMAM services are discussed in terms of their relevance, effectiveness, efficiency and sustainability. These are management and coordination, information and monitoring systems, sustainability of IMAM services within the national health system, national guidelines, equity and gender equality, capacity development, and technical and organizational support.

5.1 Management and Coordination

During the past four years, the nutrition sector in Kenya has moved from life saving parallel interventions in emergency prone areas to more preventive and integrated programmes. Now, further efforts and actions have been taken to strengthen resilience of communities. In accordance, the nutrition coordination system has been effectively developed. At national level, an Inter-ministerial Coordination Committee (ICC) brings together government ministries involved in nutrition related programmes. The ICC is functioning well, and technical coordination within the MoPHS is strong with key bodies including the Infant and Young Child Feeding Steering Committee, National Micronutrient Deficiency Control Council, National Food Fortification Alliance, Kenya Food Security Steering Group, and the Nutrition Technical Forum which incorporates all Cluster functions. A number of coordinating bodies were established at provincial and district levels, including the Provincial Health Stakeholders Forum, the District Health Stakeholders Forum and the Health Facility Committee and Community Health Committees.

The Nutrition Technical Forum (NTF) is co-chaired by UNICEF and the Division of Nutrition and oversees thematic working groups (Capacity Building, Urban, ASALs and Information). At district level, District Nutrition Technical Forums (DNTF) steer integration of nutrition services, joint actions and work toward addressing duplications and gaps in support. The NTF plays a critical role in ensuring harmonization of approaches to achieve a common vision and results among partners by developing guidance, protocols, strategies, contingency plans, and national response plans in emergencies. Although the NTF focuses on emergency affected/prone areas, its work has supported the strategy of the entire nutrition sector including the scale-up of high impact interventions. Partners consult and get approval of the NTF before moving ahead with interventions.

The nutrition response plan formed part of the Kenya Emergency Humanitarian Response Plan 2012+, an inter-sectoral plan comprised of ten sectors, which addressed the 2011 food security crisis. The Interagency Standing Committee (IASC) Real Time Evaluation (RTE) – Kenya 2012 stated that “the nutrition sector is functioning well and is a model for other sectors to follow”. Reasons given included strong support for nutrition sector coordination by the MoPHS and UNICEF and rapid scaling up of resources. At the onset of the crisis in 2010, the nutrition sector started its planning well in advance and had a response plan ready by Jan 2011; implementation of actions started then.

There are a number of good practices and lessons noted in planning and assessment. The HINI indicators were set out in the Summary Results Matrix which incorporates indicators directly relevant to IMAM and IYCN, and with the Health Sector Wide Approach (SWAP).

The strategy for addressing urban acute malnutrition was formulated upon studies and

53 “Experience in scaling up IMAM in Arid rural areas and urban settings”, presented by Valerie Wambani, MoPHS, CMAM/SUN conference held in Addis Ababa in November 2011. The Sector Wide Approach to Programming (SWAP) is a government plan for the sector based on the national policy framework and including strategy for delivery, expenditure plan and performance monitoring framework, through which the international community fund that sector.
lessons which have led to significant gains in behavioural changes and outcomes. Assessment activities built into HINI include regular surveys, surveillance and monitoring and evaluation for evidence-based decision making in addressing malnutrition. There is close monitoring of the nutrition vulnerability and collection of routine data for analysis and decision making. The IASC RTE, however, noted the lack of joint assessments, as recommended by global standards, in the emergency response.

**Intersectoral Coordination.** The “Experience in scaling up IMAM in Arid rural areas and urban settings”, study (2011) highlighted the need to “strengthen linkages with other sectors such as WASH, livelihoods and food security.” The IASC RTE identified significant opportunities for sector coordination enhancements particularly as related to agriculture and livestock, protection, health and cash interventions. Critically, the main support system for IMAM, the health sector, was cited as having less than optimal coordination resourcing. Increasing the capacity of health sector coordination could improve the effectiveness and impact of the interagency interventions. It was noted that the WASH (or WESCOORD) sector has recently received an injection of coordination resourcing which is having a positive effect on this sector’s work. Intersectoral collaboration is being strengthened with support from the MoPHS Nutrition Coordinator and UNICEF has delegated a WASH officer to support the WASH/nutrition linkages for HINI.

Promotion of greater intersectoral coordination was a key recommendation of interviewees. However, significant challenges exist for smoothing the way. Within UNICEF for example as in many other agencies, there are funding and administrative barriers to working intersectorally, the design of programmes mainly depends on donors and the donors are rarely the same for WASH and nutrition; each donor targets different regions and few are interested in long term investments. Thus planning interventions among sectors can be challenging and planning is more often done within the sector.

The GoK with support of donors and assistance agencies should facilitate joint sector planning by removing funding and planning constraints and through greater efforts to advocate for cross sector planning and funding. The GoK has recently updated the Sector Working Groups (SWGs), including health, to reflect a new system of classification of functions of government that is considered best practice.

**5.2 Information and Monitoring Systems**

In the 1970’s the GoK developed a nationwide Health Information Management System (HMIS); nutrition information used in the HMIS was based on data collected in clinics by the Child Health and Nutrition Information System (CHANIS). A need was identified in 2003 to more effectively track progress on MDG Goal 1 on malnutrition in children under five years of age and address capacity issues in data gathering and statistical analysis. A variety of nutrition surveillance and information systems operate in Kenya, including the Multiple Indicator Cluster Survey (MICS), FEWSNET, WFP-VAM as well as on-going area surveys. These systems supported by multiple organizations cover various aspects of WHO’s nutrition surveillance goals and sometimes work in collaboration with each other.

A key conclusion of the Interagency Standing Committee (IASC) Real Time Evaluation (RTE) – Kenya 2012 was that despite good early warning data well in advance, the response was driven by reactive decision-making in 2011 A number of options have been suggested to increase responsiveness, including investing in scalable Disaster Risk Reduction (DRR) systems.
programming, and augmenting the assistance community’s collective ability to create dynamic analyses and contingency planning that guide better forward leaning decision making. The creation of one food and nutrition information and monitoring system may help to better articulate nutrition needs.

The MoPHS and UNICEF have supported a nutrition surveillance system launched in 2011, which is built within the district health system. The District Health Information System (DHIS) has 11 nutrition indicators linked to the HINI and has provided timely data that has been useful in understanding trends, making decisions and responding to malnutrition crises e.g. in Arid and Semi-Arid Lands (ASAL) and Dadaab refugee camps. One aim of having the DHIS in place is to stop parallel reporting.

Data collected on a weekly basis include: admissions of children with SAM, deaths related to malnutrition and contextual factors such as disease outbreaks, population movement, and access to safe water, food prices and performance of the supplementary feeding programme. The surveillance data is triangulated with other information sources such as Arid Lands Resource Management Project (ALRMP), morbidity data, short rains and long rains assessment reports, FEWSNET food security updates, Kenya National Bureau of Statistics (KNBS) food price data and weather updates by the meteorology department.

Areas of improvement already made include analysis of IMAM indicators, data capture tools, and sensitization of District Health Records Information Officers, health facility officers in charge and District Nutritionists on nutrition indicators. An Integrated Nutrition Monitoring Summary Tool was being piloted in April of 2012 to enhance tracking of trends to facilitate timely response. Data sources will include DHIS and periodic nutrition surveys among others. An orientation package was provided to implementing agencies and feedback was requested.

Field monitoring. Joint monitoring is a means of promoting interagency and intersectoral coordination as well as promoting improvements. At the district level a budget has been allocated for joint supervision and with UNICEF nutrition support officers and WFP supported nutritionists since 2012, there has been improved joint monitoring. Long rains, short rains and SMART surveys are coordinated and implemented jointly. However, UNICEF and WFP at the national level are not seen to conduct joint field visits with the MoPHS although they are key partners in IMAM and such efforts would provide a good example for other agencies.

Evaluation. Although IMAM was initiated in 2008, this evaluation is the first direct appraisal of the effectiveness, efficiency and sustainability. As per global standards, planning should include regular reviews and evaluation and secure and reserve funding for these exercises.

5.3 Sustainable Integration of IMAM in the Health System

By design, the Integrated Management of Acute Malnutrition (IMAM) in Kenya is meant to be fully integrated into existing health systems and with the other 10 HINI. The only exception is during an emergency if scaling-up the services is no longer possible in the health system and additional capacities need to be established (e.g. temporary sites to ensure service delivery). At present, IMAM is mainly dependent on external resources. For some interviewees, the continued operation of IMAM primarily through emergency funding means that achieving sustainability may be difficult. Kenya has the potential to become a model country for the HINI but stakeholders particularly donors and UN agencies will need to see it that way. The influx of funds in emergencies is helpful to jumpstart initiatives but reliance on this source of funding could be counterproductive to ownership by the government.

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For the purposes of discussion of sustainable integration of IMAM in the national health system, the elements related to critical health systems intervention include: 1) Governance; 2) Planning; 3) Financing; 4) Service delivery; 5) Monitoring and evaluation; and, 6) Demand generation. The following summarizes and builds upon what has been discussed in other parts of this report. Overall sustainable integration has been partially achieved in Kenya and interviewees and evaluative reports generally agree on the need for accelerated integration.

1. Governance (e.g. accountability, reporting, performance management, coordination). Sustainable integration occurs when the governance arrangements for the intervention are similar to those for the general health services or for the local/national administrative structures. Steady progress is being made toward higher accountability by government agencies. NGO implementing partners are transferring their roles in IMAM to the national health system through joint efforts on the part of the GoK, UNICEF and IPs to move away from agency-centric and parallel efforts. This is occurring because of the (MoPHS, UNICEF and IP’s) joint plan to integrate IMAM and the nature of the MOUs and other agreements between the three parties, which fortify IP mandates to strengthen national capacity and enhance national performance.

The GoK is reliant to some degree on international assistance and steering for nutrition; the GoK has taken joint responsibility for coordination. Coordination is still developing at the district level particularly in intersectoral coordination. The tripartite agreement between MoH, UNICEF and WFP operates in partnership with local and faith based organisations has strengthened capacity exchange among the MoH and partners. Through the decentralization process, districts and communities will assume more responsibility and accountability.

2. Planning (e.g. needs assessments, priority setting, resource allocation). Sustainable integration occurs when decision-making is undertaken by the stakeholders who are involved in the same tasks for the general health system. There is a need for stronger joint and community based needs assessments and joint planning at the district level.

3. Financing (e.g. pooling of funds, revenue generation). Full integration occurs when the intervention is funded entirely through the national or regional general health care budget. A number of mechanisms exist for funding IMAM. Currently, the GoK assumes approximately 16% of recurrent costs of IMAM and a significant proportion of capital costs such as infrastructure and medical equipment. The government’s role in funding IMAM has increased and the 2011 allocation for IMAM within the health sector was Kenyan Shillings 150 million, up from 65 million the previous year. However, overall funding levels for nutrition are very low, as they only represent 0.5% of the total health budget. More than 75% of these funds cover human resources. IMAM is predominantly funded through emergency budgets provided by both the GoK and partners.

4. Service delivery (e.g. infrastructure, human resources, operational integration, referral systems, guidelines, procurement, and supply chain management). Services are considered to be sustainably integrated if their provision is the responsibility of the general or multi-purpose health workers. Strengths include the participation of national health service workers as the main implementers of IMAM who operate in view of national guidelines. Government supported infrastructure is used for IMAM and the expansion of outpatient treatment for SAM

62 This evaluation develops a framework for judging sustainable integration of community management of acute malnutrition which is based on a number of publications. The main framework and theory is evolved from the following documents: Rifat Atun, Thryra de Jongh, Federica Secci, Kelechi Ohiri and Olusoji Adeyi. “A systematic review of the evidence on integration of targeted health interventions into health systems.” September 2009, and. Rifat Atun, Thryra de Jongh, Federica Secci, Kelechi Ohiri and Olusoji Adeyi “Integration of targeted health interventions into health systems: a conceptual framework for analysis”, September 2009.

63 Compiled from evaluation findings, Government experiences of scale-up of Community Based Management of Acute Malnutrition (CMAM), A synthesis of lessons, prepared by the Emergency Nutrition Network (ENN), CMAM Conference Addis Ababa, 2011, January 2112, “Experience in scaling up IMAM in Arid rural areas and urban settings”; presented by Valerie Wambani, MoPHS, CMAM/SUN conference held in Addis Ababa in November 2011
has resulted in greater access to services. However, supervision is generally carried out jointly with NGOs or UN agencies supporting government efforts.

Although technical assistance is strong for capacity building, human resources shortages and staff turnover pose barriers to sustainable integration for service delivery. Some staff face heavy workloads, including implementing numerous interventions and burdensome reporting requirements, a situation that is particularly acute in the hard to reach health facilities or areas of low population density. For example, finding staff to work in Turkana, one of the most vulnerable areas, is problematic as living conditions are difficult. Human resource challenges are being addressed through efforts to better integrate reporting, and trying alternatives to clinic based services such as mobile teams to reach the population more efficiently.

The MoPHS addresses malnutrition through the Community Strategy for the delivery of level one service. However, the community units are under development at present and in most districts lack adequate community level capacity. For Community Health Workers, motivation and remuneration pose constraints to their optimum productivity, yet they are instrumental to the success of the multi-agency integrated effort. Procurement and supply chain delivery is also partially integrated with UNICEF bearing the bulk of responsibility for procurement of RUTF and shared responsibility in transporting RUTF to the end use destinations. A key challenge for sustainable integration is the streamlining of the logistics network, particularly the transport and storage systems, to reduce dependency on external assistance.

5. Monitoring and evaluation (e.g. information technology infrastructure, data collection and analysis). The M&E function of a health intervention was considered to be sustainably integrated if the responsibility rests with institutions that retained overall responsibility for M&E in the health system. The M&E function is partially integrated and with the development of the DMIS, integration should be strengthened by ensuring that follow-up by stakeholders is a joint responsibility of government and partners. A number of externally supported information and analysis systems have not been integrated with national systems. (See section on information and monitoring above.)

6. Demand generation (e.g. incentives, prevention, advocacy, population interventions – education and promotion, community mobilization and sensitization). Demand generation was considered to be sustainably integrated if mechanisms used to create incentives or IEC activities were provided jointly with the general services or were delivered by national health service workers. In Kenya decentralisation of health systems and a shift to the resource decisions being made at sub-national levels could facilitate scale-up of IMAM. Strategic planning for the integrated set of services under HINI may provide incentives for the community.

There remain challenges in promoting effective counselling for preventive behaviour changes, and community sensitization is an area requiring more joint effort, although active case finding, referrals and admissions have improved due to technical assistance. In addition to facility centered training, there is a need to devote resources to enhance the demand side through sensitising the community and strengthening their confidence to demand services. Demand has increased due to the inclusion of IMAM in district annual operational plans from 2008 onwards in Nairobi, Kisumu East and the 22 ASAL districts (Arid and Semi-Arid Lands, covered by 700 health facilities), leading to it becoming part of routine health service delivery in these areas.

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64 Taking the Kenya Essential Package for Health to the community A Strategy for the Delivery of LEVEL ONE SERVICES.
Challenges are to identify means to make progress toward sustainable ownership by the GoK and setting appropriate goals for management. For some stakeholders interviewed, a modification of mindset and stronger joint vision of what sustainable integration means will be needed and agreement on a master model of sustainable integration for Kenya. According to interviews, issues that will require consideration include the following.

- The GoK should decide where investment is the most critical and research may be needed on cost effectiveness to promote sound investment. For example, greater investment in health system staff capacity may pay off in terms of preventing MAM and SAM and medical complications, thus reducing costs. (A Bangladesh study concluded that CHWs can be successfully trained to treat SAM in communities.)
- The CMAM/IMAM model illustrates a progression of inputs and outputs but does not limit the means to achieve the outputs. For example, the cost of RUTF may be a considerable challenge to the sustainable integration of IMAM and thus alternatives that will work in the realm of national capacity should be sought. The GoK may develop its own products to address malnutrition.
- The Sphere minimum humanitarian standards were agreed upon to serve in emergencies; standards may need to be revised to represent higher or long term expectations within the national health system.

5.4 Sustainable Integration of IMAM Among Policies and Other Interventions

The Kenya Nutrition Programme Review (KNPR, March 2011) aimed to examine the overall nutrition strategy of Kenya in the light of SUN objectives, drawing on global-national connections. The KNPR found the developing policy, coordination and funding environments in Kenya conducive to promoting national gains in nutrition. As described elsewhere in this report, the encouraging developments are the national adoption of the Food Security and Nutrition Strategy and the related Food Security and Nutrition Policy (FSNP) and the 2012-2017 National Nutrition Action Plan (NNAP). The NNAP provides a framework for coordinated implementation of nutrition intervention activities by the government and nutrition stakeholders.

Lessons from the 2011 CMAM conference and synthesis of nine country case studies including Kenya, indicate: “…The need to reflect CMAM in a national overarching health policy is paramount if scale-up of the delivery of treatment through national health structures is to be properly supported and resourced.” The National Health Sector Strategic Plan of Kenya, 2008 – 2012 states that in order to achieve the overall health care goals of Vision 2030, the health sector will have to undergo key reforms, through an enhanced regulatory framework and the creation of an enabling environment to ensure increased private sector participation and greater community involvement in service management. This will be followed by increasing financial resources to the sector and ensure efficient utilization of resources. Improved governance, decentralization, increased collaboration with stakeholders and granting of autonomy to provincial and district hospitals will thus be the hallmarks of a reform process in the sector up to 2030. The Vision 2030 is being implemented through Medium Term Plans, (MTP’s).

In Kenya, there is a good degree of executive involvement to promote improved nutrition programme coordination, although only some of these efforts are directed to the treatment of SAM and IMAM is not explicitly incorporated into national agendas. The KNPR notes that the FSNP while providing a strong basis for food security development does not provide...
The National Nutrition Action Plan (NNAP) offers practical guidance. Disease control efforts for malaria, HIV/AIDS and maternal, newborn and child health contain nutrition components, but they may not be well articulated into a national nutrition strategy. The KNPR concluded that strategic nutrition inter-linkages in Kenya need to be stronger and their relationships highlighted to international activities such as UN Comprehensive Framework for Action for Global Food Security and Climate change mitigation. An ENN assessment made similar conclusions, noting that nutrition is low on the political agenda in Kenya indicated by minor budget allocations and therefore, a unified strategy and dedicated spokespersons are needed.

Importantly, the High Impact Nutrition Interventions (HINI) have the potential of covering underlying causes of malnutrition such as poor pre-natal and maternal nutrition, weak infant feeding practices, and insufficient coverage of childhood disease prevention. Preliminary results indicate increased positive behaviour changes in the 22 districts (of 47) where HINI is implemented. Funding for the HINI and promoting its wider coverage is critical to the prevention of wasting, stunting and underweight. Although the HINI is implemented through the national health system, there is still heavy reliance on the donor community to provide resources.

Since about half of the top ten risk factors for premature mortality and disease burden among children under five years of age are nutrition-related, ensuring central level nutrition capacity is important. The positioning of the Nutrition Services Department should ensure that it has the related level of responsibility and accountability, with advocacy clout in related departments and ministries as well as being supported budget-wise and this support needs to be extended to the county administrations in the process of decentralization.

The “Summary Results Matrix: Government of Kenya – UNICEF Country Programme, 2009 – 2013” illustrates a well-integrated multi-sector multi-actor strategy with objectives drawing on the MDGs and UNDAF outcomes, and including the health, education, and water SWAPS, disaster risk reduction and attention to HIV/AIDS. The strategy relies on partnerships with UNESCO, WFP, WHO, numerous GoK ministries, various donor groups, NGOs and civil society organizations, among others. Programme integration meant that no specific acronyms such as IMAM were mentioned but rather the interventions were unified in a set of focus areas, indicators and results. To support this integrated framework, a number of foundation elements need strengthening, such as a national nutrition strategy, intersectoral coordination, funding sources and information and monitoring systems, as described above. Furthermore a strategy for scaling up of IMAM needs the endorsement of both central and local authorities and long term funding to signify national commitment.

5.5 National Guidelines

The “National Guidelines for Integrated Management of Acute Malnutrition” (2009) in Kenya represent a multi-agency effort, and describe well defined, comprehensive and clear standardized treatment protocols. The national IMAM guidelines along with job aids such as posters, counselling cards, and flowcharts have been powerful tools for promoting and strengthening harmonized IMAM services. The guidelines have been developed into a handbook (March 2010) and training materials. Guidelines include management of acute malnutrition in infants less than 6 months of age as well as management of malnutrition in the context of HIV and AIDS and emergency nutrition. Treatment protocols for SAM in inpatient care, outpatient care and community outreach, and MAM management are tailored

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72 Improvements in Infant and Young Child Nutrition in HINI supported districts, powerpoint presentation, UNICEF, October 2011.
to the country’s needs. There is practical guidance for monitoring of RUTF usage and detailed inputs for counselling in households.

Most interviewees agreed that national guidelines are more utilitarian than regional guidelines, but there needs to be a regional action plan, for example, to take into consideration the variations such as Somalia protocols compared to Kenya’s or Ethiopia’s, and standards that will be important in refugee emergencies.

The following suggested improvements to the guidelines emanate from evaluation findings, and emphasize means to strengthen the weak areas in IMAM implementation. Revision of the guidelines will provide an opportunity to make them well suited to the Kenya context, allow stakeholders to debate the applicability, for example, of Sphere standards, and to increase ownership in the districts/counties.

- **Develop the Kenya model for addressing acute malnutrition.** Give more emphasis to community outreach as a key mechanism to promote coverage of malnourished children and prevent default and relapse through sensitization, screening, referral, admission, counselling, and follow up. The community outreach section could be moved to the forefront of the guidelines and tied to the national community development strategy and the roles of the community units and CHWs.

- **Integrate the guidelines with IYCF, IMCI, etc.** Broaden the perspective where associated interventions, actors, indicators, and outcomes are tied together conceptually and operationally for the health worker. Include the role of traditional medicine.

- **Explain IMAM management based on principles of results based management,** describing a community assessment and how it should be used, joint planning and who should be involved, promoting intersectoral coordination at the district and community levels, and means to monitor qualitatively and through assessing treatment coverage, other than largely by the Sphere standards within admission boundaries.

- **Include information and monitoring systems.** The current training regarding the DHIS and information systems should be part of the guidelines so all health staff understand the need to strive for more accurate data recording.

- **Include equity and gender equality.** Equity and gender principles should be detailed in the guidelines as a section and mentioned throughout the guidance.

- **Offer suggestions as to how operational realities for staff may be addressed,** such as time savers, efficient means of report completion, hints for combining tasks and where sources of support can be found.

### 5.6 Equity and Gender Equality

Most bodies of guidance and standards for management of acute malnutrition, both global and national, do not adequately integrate principles of equity and gender equality and often these principles are implied rather than explicit and not detailed in terms of practice. The Sphere Project Handbook *Humanitarian Charter and Minimum Standards in Humanitarian Response* (2011) covers children and gender as cross-cutting themes and highlights concerns regarding vulnerable groups. New guidance is forthcoming from UNICEF and the UNEG regarding human rights, gender and equality in evaluations that is useful for planning.

As mentioned in Chapter 4, not all acutely malnourished children benefit from IMAM in the targeted districts and not all districts are targeted, however, expansion is progressing. By April 2012, facilities implementing HINI including IMAM were 66% (785) out of 1,184 targeted. This rose to 72% (856) by November 2012. Stunting is a serious problem in most provinces (ranging from 28% to 42%) and its prevalence does not necessarily correspond to

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74 UNICEF, “Guidance on Equity-Focused evaluations”, draft July 2011; United Nations Evaluation Group (UNEG) “Handbook for Integrating Human Rights and Gender Equality Perspectives in Evaluations in the UN System”, draft for review only. Both of these documents are in the review stage and are not quoted and only broad content is referred to.
the most food insecure areas, which often receive funding focus. A WFP study in 2010 looked at the rates of malnutrition among livelihood clusters in urban areas. The rate of acute malnutrition was within WHO acceptable rates (<5%) in all livelihood clusters with the exception of those in Pastoral livelihood clusters. By contrast, stunting rates were above WHO acceptable levels in all with the exception of NE Pastoral. The high stunting rates may be indicative of the impact of chronic food insecurity and/or repeated infections.75 Equity may be more of a challenge as the counties assume governance and grapple with the responsibilities of the health system.

A number of good practices support equity and gender equality, these include DHIS data disaggregation and sectoral mapping. The OCHA Kenya (Nutrition Working Group and Cross-Cutting Issues) website offers a number of documents with guidance on gender in food security, nutrition and emergencies.76 General guidance promotes assessment of needs by group and sex, alertness by assistance staff to possible gender and equity issues, and collecting data by sex and age. The IASC RTE determined that support was provided in an impartial manner in the 2011 response to the food security crisis, and took into account the needs of specific target groups (women and children), serving both the IDPs and the affected communities. The Kenya Emergency Humanitarian Response Plan (EHRP) 2012+ (of which nutrition was a part) utilized a Gender Marker exercise in the 2012+ appeal resulted in the following: $330 million worth of projects have received a scoring of 1 that indicates that the projects have been designed to contribute in some limited way to gender equality. Projects amounting to $18.5 million have received a zero which indicates no signs that gender issues were considered in project design.77

The concept of social protection is upheld in national efforts to promote community cohesion for development. Social protection is a set of interventions whose objective is to reduce social and economic risk and vulnerability, and to alleviate extreme poverty and deprivation. A goal of social protection in Kenya is: To establish a government-led national system for long-term and guaranteed cash transfers to the poorest and most vulnerable 10% of households in Kenya.

Possible gender and equity issues identified in the evaluation include the following.
- Coverage responds to funding which is to a large extent forthcoming in emergencies and may focus on food insecure areas, thus attention needs to be drawn to other parts of the country and acute malnutrition that is prevalent there.
- HIV/AIDS focus in some IMAM sites may be a stigma to drawing other children.
- Many remote health facilities exist in Kenya, mobile IMAM coverage could not be ascertained, and some areas are not fully geographically covered by health sites, therefore coverage estimates are not conclusive. There is a need to focus on following up with the pastoralist communities which requires mobility and staff.
- The Kenya IMAM guidelines and handbook do not provide background on equity and gender equality or alert health staff to possible issues that may arise and this should be remedied in updated guidelines, as mentioned in the guidelines section.
- Nutrition surveys capture the gender differences and whether they are statistically significant, however the surveys do not generally provide a summary of gender-related findings. For example, if more underweight and stunting occurs in boys as seems to be the case, the possible reasons tend to not be explored.78

75 Comprehensive Food Security and Vulnerability Analysis (CFSVA) and Nutrition Assessment in Kenya High Density Urban Areas, Government of Kenya, World Food Programme, Food and Agriculture Organization (FAO), and FEWSNET, 2010, exec
76 sum.
• It is not clear whether data collected at IMAM sites is disaggregated by gender similar to the nutrition surveys; however, this is clearly the recommended practice. (Disaggregated data on IMAM services was not available to the evaluation team.)
• It is unclear whether community assessments (defined by FANTA, Training Module 3) are programmed in IMAM sites and without this specific data, it is difficult to make assumptions regarding whether gender and equity issues are considered in IMAM design. Children who might be missed for IMAM services, including minority ethnic or other possibly vulnerable groups such as those covered by traditional medicine need to be identified country wide and specific actions taken to include them. For the very poor and those using traditional healers, it is possible that these children do not interface with the national health system at all and yet they may surface in emergencies as MAM or SAM cases. It is therefore important that these children are identified in the community, a task which may be best suited to community volunteers, civil society organizations or CHWs, who are likely to know the communities well.

5.7 Capacity Development and Training
Between 2008 and 2010, training for IMAM and IYCN was ongoing. In 2010, the Nutrition Technical Forum (NTF, nutrition cluster), with support from UNICEF, promoted a strategy of on-the-job (OJT) training, in which UNICEF and NGO nutrition partners support national health staff to enhance the quality of nutrition interventions and minimize lost opportunities for nutrition counselling and supplementation. Within the NTF, Capacity Building and Development Working Group (CDWG), an OJT tool was developed and vetted with the Infant and Young Child Feeding (IYCF) Steering Committee as well as the National Micronutrient Deficiencies Control Committee. The OJT training guidelines have also been developed to support mentoring for HINI including MAM. This includes a structured and standardized approach to capacity assessment, and focus on the key OJT steps.

The Kenya IMAM capacity development experience contributed to lessons learned (CMAM Conference, 2011) regarding the use of TOTs and OJT. Learning visits have also been used as an alternate form of mentoring, whereby health workers from high performing sites visit low performing sites. Good practices in Kenya as noted in the 2011 CMAM conference were as follows:79
- On the job support was essential for the retention of skills and continuity of scale-up; As the majority of training was on the job, staff were not taken out of facilities.
- With proper planning, this method actually allowed more staff to be trained than the traditional TOT approach. The added value of this approach is that advice between the same cadres of health worker is likely to be most appropriate, as they have a better understanding of the day to day challenges being faced.
- In-service training at the different health professional levels will need to be maintained, but is expected to decrease in importance over time (e.g. refresher trainings, updates of new evidence) when pre-service training is well established.
- Critical inputs are the adoption of health workers' national performance appraisal system, symbolic remuneration for volunteer workers, and other career promotion health staff and support for IMAM at the local level.

In 2010 and 2011, the Emergency Nutrition Network (ENN) conducted a pre- and post-assessment on a pilot initiative in Kenya to build sustainable capacity for nutrition in emergencies (NIE) including training of health professionals in institutes of higher education and incorporating necessary components of NIE.80 Several universities had planned to

launch short courses on topics such as NIE, Nutrition and HIV, and Food Security. The ENN assessment identified the following issues:

- On the Job training is dependent on external support and there remains an issue of ownership of nutrition activities
- IMAM is not explicit in the job descriptions of nurses, while reporting on nutrition is an additional burden for staff so long as it is not integrated in the health reporting system
- While there is currently only one nutritionist per district, nurses are the frontline staff but they receive minimal pre-service training in nutrition, do not prioritise nutrition work and tend to delegate it to Community Health Workers (CHWs).
- CHWs have low capacity for writing reports and work that requires numeracy and literacy, therefore IMAM training has focused on technical aspects with little focus on monitoring, reporting or stock management and is therefore insufficient.
- In the absence of NGO support nutritional activities, particularly supplementary feeding, are quickly neglected. The NTF is now working more closely with the districts to investigate and map these gaps and is putting together a Capacity Development Plan.

A major challenge in capacity development in Kenya is the high staff turnover and the weak capacity of the health services. Staff turnover within health services occurs at all levels and can be due to poor pay and motivation and, particularly though not exclusively in emergency contexts, to the loss of staff to more highly paid jobs in NGOs and international organisations. Staff turnover has necessitated repeated trainings. The need for training on different skills sets such as management of planning, logistics and supply chain management, monitoring, supervising and reporting, that come up most often as additional training needs that have not always been included from the outset. The focuses for these trainings are the district health teams in Kenya, additional trainings have indeed been organised for these groups on these particular areas.61

Challenges identified in this evaluation for strengthening capacity development include the following.62

- Pre-service training (PST) of medical and nursing teaching institutions and community education does not all include training on IMAM. If PST is strengthened, the role of OJT could be to update staff on the basic skills they already have, as well as to introduce new protocols and policies and could reduce reliance on external support.
- It is unclear whether nutrition capacity assessments are carried out on a regular basis to decide what human resources are needed at what level and what their functions are.
- Nutrition training needs to be given to the community units for implementation of the Community Strategy which are under development at present and in most districts lack adequate community level capacity.
- Progress on capacity development is inconsistent over districts and should be relevant to the scaling up of IMAM, thus it is necessary to ensure enhanced coverage of districts that may fall behind.
- CHWs need adjacent support to carry out their duties in addition to training, including more support to reach children in their homes, increasing the efficiency of integration of interventions to reduce the implementation burden, and consolidating the reporting requirements.

5.8 Technical and Organizational Support
The role of UNICEF along with WHO and WFP as mentioned in the joint statement on CMAM is to mobilize resources, facilitate local production of RUTF, support nutrition protocols, work with the government, private sector and NGOs, conduct operations research.

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to refine protocols and jointly implement CMAM in emergency and non-emergency situations.\textsuperscript{83} The roles of UNICEF and its implementing partners (IPs) who are mainly international NGOs are further defined in the MOUs with government. The Nutrition Technical Forum (NTF) mandate is broad and aside from maintaining effective coordination mechanisms includes ensuring coherent needs assessments, identifying gaps in planning and strategy development, applying standards, advocacy and resource mobilization, training and capacity building, and attention to cross-cutting issues, monitoring and reporting.\textsuperscript{84}

A synergistic process has largely promoted the objectives of IMAM. The roles of NGOs in IMAM have evolved through coordination mechanisms at national level from implementation of small scale programmes and technical support to being instrumental in influencing IMAM agenda both nationally and internationally. NGOs now employ more senior people who do more advisory work. The NGO support in Kenya now focuses on the district rather than health facility level for supporting the management of IMAM (particularly supervision, supply management, monitoring and reporting) within the existing health system. The UN agencies have performed a critical role by helping to broker the GoK-NGO relationship into a constructive partnership.\textsuperscript{85} At the District levels, UNICEF and NGO partners have been working in close collaboration with DMOH regarding issues such as setting up community units, recruitment of community health workers, incentives, training and implementation in order to ensure that any community supported interventions are easily integrated into the national strategy once NGO partners exit.

UNICEF plays an integral role in promoting nutrition and intersectoral coordination, co-leading the nutrition cluster with the Ministry of Public Health and Sanitation, the education cluster with the Ministry of Education, the child protection cluster with the Ministry of Gender and Children’s Affairs, and the WASH cluster with the Ministry of Water and Irrigation. UNICEF currently funds the employment of qualified nutritionists in arid and semi-arid districts who support the overall nutrition strategy and implementation in the districts. UNICEF supports the provision of anthropometric equipment and therapeutic food (for in-patient and out-patient needs) as well as Vitamin A and the Micronutrient Initiative, and funds the design and printing of a substantial proportion of the guidelines and job-aids that are currently in use.

UNICEF has been praised in the IASC Real Time Evaluation of the response to the food security emergency, as providing a strong foundation for the nutrition sector response which stood out as the one of the most effective. The reasons cited were that UNICEF scaled up resources rapidly with the appropriate technical expertise and significant efforts and staff resourcing were devoted specifically to the sector’s coordination function.\textsuperscript{86} UNICEF and WFP have been assisting the GoK in reducing financial barriers to healthcare access and greater food security through, for example, the cash transfer programmes, voucher schemes and results-based financing.

There is substantial evidence that technical support has resulted in significant gains in process, coverage and outcomes.\textsuperscript{87} From 2009 to 2011, the proportion of health facilities offering IMAM services has increased from 50% to 83%. Caseloads in the urban areas have steadily doubled each year from an initial 1,600 in 2008 to 4,700 in 2010, whilst maintaining quality within Sphere standards for recovery and death rates. The expansion of the IMAM outpatient services via routine health centre delivery services resulted in greater access to

\textsuperscript{85} Government experiences of scale-up of Community Based Management of Acute Malnutrition (CMAM), A synthesis of lessons, prepared by the Emergency Nutrition Network (ENN), CMAM Conference Addis Ababa, 2011, January 2112
\textsuperscript{86} Interagency Standing Committee (IASC) Real Time Evaluation (RTE) – Kenya 2012.
\textsuperscript{87} Compiled from evaluation findings, Government experiences of scale-up of Community Based Management of Acute Malnutrition (CMAM), A synthesis of lessons, prepared by the Emergency Nutrition Network (ENN), CMAM Conference Addis Ababa, 2011, January 2112.
nutrition services with improved coverage in Nairobi and Kisumu East. A total of 54 health facilities (run by the MoH with support from partners) now integrate the management of acute malnutrition within their nutrition services within the urban slums.

Technical support is still largely forthcoming from external sources and while producing results, it is important to recognize that nutrition technical support within the MoH is still weak in the district/countsies. There is little nutrition advocacy going on within communities where it is most needed for the community based approach. There is a shortage of nutritionists, usually one per district, and nursing and medical staff do not generally have adequate in depth training in nutrition science and must attend to a variety of health care duties.

The following are suggestions in strengthening technical support.

**Mobilization of resources.** The GoK, MoPHS, UNICEF and partners can work with stakeholders in SUN, REACH and other initiatives, such as HIV and AIDS programmes, to gain support for long term IMAM. Emergency funding itself presents an issue due to its short-term nature (3 months to 1 year), which is not conducive to consideration by donors or agencies of the longer-term picture. A mind-shift in operations and focus is needed if humanitarian response is also to attempt to tackle the underlying issues and causes of malnutrition and develop sustainable capacity to respond.

**Assessment and planning.** The NTF information working group has been working on strengthening assessment and surveillance with the District Health Services. There is need for the MoH to develop a uniform system of ensuring that IPs give a clear overview of the nutritional situation of the districts they are covering during the initial stages, work with the districts to develop nutrition targets, and clarify how they intend to work with MoH as well as any other local partners to ensure that systems are strengthened and targets are achieved. This should be discussed and agreed upon with the MoH at district, provincial and national level.

**Facilitate local production of RUTF.** As further explored in Chapter 6, constraints to local production should be more aggressively addressed to reduce costs of IMAM and to promote sustainability as well as local industry, while exploring alternatives that Kenya can best support.

**Advocacy.** Nutrition is low on the political agenda in Kenya: in 2008/09 nutrition commodity allocation amounted to 0.1% of the health budget allocated for commodities, while nutrition activities comprise only 0.5% of the health budget. A vibrant professional interest and focus on nutrition is needed. A nutrition ambassador, Angeline Kidjo, has drawn global attention to the issues surrounding acute malnutrition in Kenya. However, more effort is need to ensure important nutrition in emergencies (NIE) issues get onto the political agenda. The MoPHS and UNICEF could take the lead to explain the roles of food security, targeting, and social protection to promote equity. The MoPHS and UNICEF needs to move into areas that have never had a nutrition programme and promote coverage with well-trained nutritionist advisors. UNICEF’s global voice needs to be louder jointly ‘in a chorus’ with WFP and other partners to advocate for sustainable alternatives to MAM management.

**Identifying gaps in planning and strategic development.** As described above, technical support can help to identify how various strategies will serve the purpose of addressing the causes of malnutrition with the intent of creating one unified national nutrition strategy. This support might be forthcoming from the UNICEF regional office or headquarters.

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88 Government experiences of scale-up of Community Based Management of Acute Malnutrition (CMAM), A synthesis of lessons, prepared by the Emergency Nutrition Network (ENN), CMAM Conference Addis Ababa, 2011, January 2112
89 Partnership Framework Between Ministry of Public Health and Sanitation / Ministry of Medical Services, UNICEF/WFP and Partners to support Delivery of Essential Nutrition Services in Kenya March 2011
CHAPTER 6: ANALYSIS OF IMAM COSTS, SCALE-UP AND SUSTAINABILITY

6.1 Cost Analysis

6.1.1 Breakdown of Partner Capital and Recurrent Costs

In 2011, the three main partners spent a total of US$6,447,861 on IMAM, with UNICEF’s contribution accounting for 54% and WFP’s 30%, while the Government of Kenya (GoK) contributed the remaining 16%. By cost category, UNICEF allocated more than the others for its capital and recurrent expenditures as shown in Table 6.1.

Table 6.1: Government, UNICEF and WFP Share of Total Costs (US$)

<table>
<thead>
<tr>
<th></th>
<th>Capital</th>
<th>Recurrent</th>
<th>TOTAL COST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US$</td>
<td>%</td>
<td>US$</td>
</tr>
<tr>
<td>Government</td>
<td>6,594</td>
<td>3</td>
<td>1,027,528</td>
</tr>
<tr>
<td>UNICEF</td>
<td>210,136.04</td>
<td>97</td>
<td>3,495,415.40</td>
</tr>
<tr>
<td>WFP</td>
<td>0.00</td>
<td>0</td>
<td>1,918,324</td>
</tr>
<tr>
<td>Total</td>
<td>216,730</td>
<td>100</td>
<td>6,231,131</td>
</tr>
</tbody>
</table>

Capital Cost/Expenditure

In 2011 UNICEF procured and distributed anthropometric measurement equipment such as weighing scales, trousers, measuring boards and MUAC tapes, as well as electronic equipment, such as computers and accessories amounting to US$210,136, including the cost of transport calculated at 15% of the total initial procurement cost. Developing IMAM protocols and guidelines cost the agency more than US$29,000. Generally, UNICEF allocated more funds on recurrent interventional activities, amounting to US$3.29 million against capital investments US$210,136, totalling US$3,495,415. When analysed by district, at US$1.16 million, Samburu received the most funding followed by Turkana with US$1.015, while Kilifi received least as shown in the Table 6.1.1 and 6.1.2 (see annexes) most likely as it is a newer IMAM.

Regarding the GoK capital expenditure, it totals US$6,594 for the purchase of computers. Capital costs have been standardized at US$942 per district towards purchase of at least two computers. The relatively higher costs in the vast Turkana district, the poorest in the country, would be attributed to the larger number of admissions in outpatient treatment for SAM and management of MAM compared to the other districts, implying more cumulative staff-time investment and quantity of medication. The smallest allocation was at national level in the division of nutrition for its administrative and coordination functions (see table 6.1.2. in the annexes for details). However, as mentioned earlier, it was not possible to quantify the value of government assets such as infrastructure or medical equipment. If this were the case, then capital investments could be far much higher.

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90 Terminologies used

Capital Cost: The value of capita resources which have useful lives greater than one year (Gruen and Black, 2007), three years for this IMAM evaluation.

Recurrent Cost: The value of recurrent resources with useful lives of less than one year that have to be purchased at least once a year (Ibid), the same timeframe has been used in this evaluation.

(Government) Indirect Cost: The value of resources expended by patients and their carers to enable individuals to receive an intervention (Ibid)

Cost-efficiency: maximum output for a given level of resources or minimum cost for a given level of output (Donaldson et al, 2005)
Recurrent Cost/Expenditure

Cost estimates based on Programme Cooperation Agreements (PCA) show that UNICEF had approved disbursement of more than two million US$2,160,453 for the period December 2010 to November 2011, equivalent to about Kshs180 million. This amount was meant for implementation of 7 projects spread across 6 districts: two each for Turkana and Samburu and one each for Laikipia, Kitui and Kilifi respectively. These funds were used by the partners to implement activities such as on-job training (OJT); nutritional surveys; monitoring and evaluation; advocacy and paying staff salaries. These projects were to be implemented within periods not exceeding one year, therefore by definition the accrued amount is herein classified as a recurrent cost. Other recurrent expenditures were in procurement and distribution of RUTF, Formula F75 and Formula F100, all amounting to about US$909,390, including the cost of transport; as well as proportion of staff time allocation and salaries amounting to US$215,415.

As stipulated in the partnership agreement with the GoK, UNICEF and WFP, the latter procured and distributed food supplements worth US$1,918,324 in Kilifi, Kajiado, Turkana, Samburu, Laikipia and Kitui districts under the MAM management component. RUTF accounted for 24% (US$772,891.71) of the agency’s recurrent expenditure. Combined, UNICEF and WFP spent US$2,691,215 of the US$5,203,603 (52%) recurrent expenditure on RUSF and RUTF.

As already mentioned in the methodology, staff time and medication were the only variables used to compute recurrent costs incurred by the GoK in implementation of IMAM in 2011. The government cumulatively and indirectly invested slightly more than US$1 million on IMAM in 2011 including proportion of salary of staff of four in the Division of Nutrition, amounting to US$7454. The estimated recurrent expenditure stood at US$1.027 million.

6.1.2 Component Costs and Cost per Cured/Recovered SAM & MAM Cases

The community outreach component has been excluded from the analysis due to lack of screening data at community level. The three components under investigation are shown in Figure 6.1 as Inpatient treatment (Stabilization Centres - SC), Outpatient treatment (OTP) and Supplementary feeding for MAM management (SFP) costs totalling US$3,746,920 in 2011. It was more expensive in terms of total cost (US$2,396,888) to manage children with MAM through provision of food supplements (SFP), followed by SAM children in OTP (US$1,266,337) and SAM in inpatient treatment facilities (SC) at a cost of US$83,695 (see Figure 6.1 below and Tables 6.1.3, 6.1.4 and 6.1.6 in the annexes.).
The per unit cost per child with SAM treated in inpatient facilities amounts to US$84.51, inclusive of cost of medication, staff time, F75, and F100 (but not equipment) while per unit cost per child cured in outpatient treatment facilities amounts to US$93.79 inclusive of cost of medication, staff time, and RUTF. The cost of MAM management amounts to US$56.51 on account of supplements and staff time allocation. (Also see Tables 6.1.3, 6.1.4 and 6.1.6 in the annexes). This is comparable to the US$99.03 figure obtained by the Ministry of Planning and Development based on unpublished UNICEF/WHO integrated Management of Childhood Illness (IMCI) costing models in a hospital setting, including cost of drugs, bed and food, laboratory tests and personnel by 2015.

6.2 Cost-Efficiency

From an economic perspective, an investment is cost-efficient if the intended maximum output for a given level of resources is realized. A cost analysis on the basis of resource inputs in US$ and outputs in terms of percentage of children cured or recovered was done. Results showed that MAM management supplementary foods were more efficiently utilized in Kajiado district, with 97.27% rate (4660 cases admitted, 4533 cured), followed by Samburu district at 73.11% (5401 admitted, 3949 cured), as detailed in table 6.2. The same districts seem to have used their resources more efficiently in the outpatient services: Kajiado district 97.75% (1087 cases admitted, 1060 cured) and Samburu district with 59.07% (1288 cases admitted, 746 cured), as detailed in table 6.3.

Table 6.2: Cost-Efficiency of the MAM Management Component Supplementary Feeding

<table>
<thead>
<tr>
<th>District</th>
<th>Kitui</th>
<th>Kajiado</th>
<th>Kilifi</th>
<th>Laikipia</th>
<th>Samburu</th>
<th>Turkana</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input (US$)</td>
<td>266,525.4 8</td>
<td>345,957.4 8</td>
<td>64,919.8 4</td>
<td>106,107.8 4</td>
<td>499,733.8 4</td>
<td>111,364.3 8</td>
<td>239,688.2</td>
</tr>
<tr>
<td>Cases admitted</td>
<td>5,772</td>
<td>4,660</td>
<td>1,295</td>
<td>3,844</td>
<td>5,401</td>
<td>23,176</td>
<td>44,148</td>
</tr>
<tr>
<td>Cases cured</td>
<td>3,883</td>
<td>4,533</td>
<td>528</td>
<td>2,003</td>
<td>3,949</td>
<td>10,750</td>
<td>25,646</td>
</tr>
<tr>
<td>Output/ % cured</td>
<td>67.77</td>
<td>97.27</td>
<td>40.77</td>
<td>52.10</td>
<td>73.11</td>
<td>46.38</td>
<td>62.90</td>
</tr>
</tbody>
</table>

Table 6.3: Cost-Efficiency of the Outpatient Treatment Services

<table>
<thead>
<tr>
<th>District</th>
<th>Kitui</th>
<th>Kajiado</th>
<th>Kilifi</th>
<th>Laikipia</th>
<th>Samburu</th>
<th>Turkana</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input (US$)</td>
<td>102,704.7 2</td>
<td>101,949.7 3</td>
<td>30,836.9 1</td>
<td>96,509.9 1</td>
<td>12,080.2 8</td>
<td>813,534.4 6</td>
<td>126633.7</td>
</tr>
<tr>
<td>Cases admitted</td>
<td>1094</td>
<td>1087</td>
<td>329</td>
<td>1029</td>
<td>1288</td>
<td>8674</td>
<td>13501</td>
</tr>
<tr>
<td>Cases cured</td>
<td>594</td>
<td>1060</td>
<td>99</td>
<td>597</td>
<td>746</td>
<td>4854</td>
<td>7950</td>
</tr>
<tr>
<td>Output/ % cured</td>
<td>54.29</td>
<td>97.75</td>
<td>30.15</td>
<td>58.02</td>
<td>59.07</td>
<td>55.96</td>
<td>59.21</td>
</tr>
</tbody>
</table>

Efforts were made to seek views on disbursement and allocation of funds; results from the field indicate that the rate of disbursement was generally good, except for one case where there was some delay in release of funds by UNICEF. (In addition to UNICEF’s contribution,
partners and other donors contribute significantly.) There is also a challenge in timely approval of project documents and signing of memorandum of understanding which takes relatively long. This has a cost implication on account of delayed implementation of activities and rising cost of inputs with time. As well, co-financed projects take too long to kick off, for example, a delay to disburse funds by one of the co-donors. In such a scenario, partners ought to explore alternatives that can ensure timely implementation of interventions.

6.3 Sustainability and Options for Scaling up IMAM

In development cycles, sustainability refers to long-term interventions to meet human needs not only in the present, but also for generations to come. Interviewees visualize IMAM as sustainable within the health services and communities, and thus all efforts must be made to scale it up in a sustainable manner, leading to a wider coverage. Scaling-up is already ongoing as witnessed from the increasing number of outpatient treatment facilities and community outreaches across the districts. Moreover, the need to scale up IMAM has a cost implication and hence the need to mobilize more resources, as well as seek cheaper alternatives, including local production of RUTF and other supplements.

In Kenya, out of pocket payment by households, commonly referred to as user fees, account for 51.1% of financing in the health sector in the form of medication, registration fees, bed charges, among others. This source of healthcare financing was mentioned as one of the factors responsible for increased defaulter rates due to bed charges, at least in Turkana district hospital. Those who can’t afford simply forfeit any extra day of stay in the SC. As observed by Falconer, “the introduction of user fees typically produces a marked decline in service utilization in the lowest income brackets, indicating that user fees restrict the poorest sections of society from accessing healthcare. The costs of healthcare are often significant for those in the lower income quartiles as out-of-pocket expenditure consumes a higher proportion of the domestic budget. The interventions for both maternal and child health are essential and should not be funded by user fees as this discourages the poor from accessing the required services.”

RUTF has proved to be effective in promoting rapid weight gain in malnourished children since its invention in the late 1990s, however, at a relatively high cost. The high cost of the imported RUTF is a significant barrier to the wide-scale implementation of IMAM. However, it is acceptable that the high price is meant to recover research, development and productions costs. To overcome this cost barrier, the global CMAM strategy promotes local production of RUTF, and this has been successful in Malawi. The cost of the local version is about half that of the imported version there but thus far, this has not been the case in Kenya and the main cost saving has been on the logistical costs. Comparison efficacy studies demonstrate that the locally produced RUTF is nutritionally equivalent to the imported version.

A restrictive patent held by Nutriset means that the majority of producers these are part of the Nutriset franchise (Niger, Ethiopia, DRC and Mozambique) or supported by Valid Nutrition (Kenya, Ethiopia and Malawi), a not for profit company with an agreement with Nutriset to operate in certain countries. As highlighted in the CMAM Conference (Addis Ababa, 2011), the international patent on RUTF covers several countries in Africa but now there is a patent usage agreement that local producers can sign with Nutriset. A licence is

92 Falconer R, Should low income countries increase health system funding by increasing user fees. AMJGH Vol 2 Iss 1: http://www.almamata.net/journal/AMJGH_2_17_22.pdf (2009)
needed if a country wishes to use the Nutriset formula and this can be obtained through the Nutriset website.

In regard to production of ready to use supplementary and therapeutic foods in Kenya, there are some independent producers and at least one local NGO mills and distributes supplementary foods at a reduced cost. However, the technical requirements particularly to achieve the quality standards demanded by UNICEF have made it hard for these companies to manage without experienced technical support. In addition to the patent, the two main limiting factors for the proliferation of local production of RUTF have been the sourcing and cost of ingredients (particularly sourcing of quality peanuts and the costs of milk powder) and the quality control required to ensure an absolutely safe product is supplied to such a vulnerable group. Local production has appealed in particular to countries with peanut production, however peanuts are vulnerable to aflatoxin contamination and therefore measures are needed right from grower's level to ensure proper storage. Regular aflatoxin testing is a requirement for all producers and this in itself has proved problematic in Kenya as samples often have to be sent abroad, causing delays.96

Since supplementary foods are already being produced in Kenya, it would seem possible to step up the production. However the efficacy and effectiveness of this production has not been explored in scientific terms although the products are approved by the Kenya Bureau of Standards. The companies supply products to organizations such as CARE, Child Fund, HelpAge Kenya and various churches. In the past an attempt has been made to produce RUTF locally by Insta Products (EPZ) Limited, a Kenya based private company. Insta had a collaboration agreement with Valid International for the development of an RUTF business in Kenya and is an approved supplier for UNICEF.

“Kenya has the capacity to produce food supplements locally both in terms of human resource and infrastructure, including research facilities. Institutions such as the International Livestock Research Institute (ILRI) can avail for hire laboratory facilities for research. However, the biggest challenge is to raise enough capital for research and development, which can cost up to US$15 million and another US$20 million dollars to cater for initial production of market ready low cost nutritious foods. The government of Kenya can contribute through waivers of taxes on such foods”. Key informant, Nairobi.

“We should think beyond the “plumpy nut” by using locally available resources, including education to reduce cases of malnutrition. Equally, we can produce supplements from locally available materials”. Key informant, Kisumu.

“If Malawi can produce RUTF, why not Kenya? Though I can’t tell the actual cost to date, we have been involved in research and development of four types of supplements locally since 2006. However, a sustainable local market may be proving a challenge in the future”. Key informant, Nairobi.

The technology to produce RUTF is relatively simple and can be transferred to any country with minimal industrial infrastructure.97 Some of the enabling factors in Kenya include a vibrant private sector that can act as a catalyst in local production of RUTF using the public-private sector strategy. The GoK can play a coordinating role among various stakeholders that seek to be involved. For example, the Ministry of Agriculture can be involved in addressing issues related to aflatoxin in locally produced peanuts. With enhanced political commitment in formulation and implementation of nutrition and food security policies, Kenya has the capacity to become self-sufficient in general food production and even export to

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neighbouring countries. The GoK can also facilitate scaling up of IMAM and local production of supplements by exempting market-oriented nutritious commercial foods from taxes. Also, stakeholders should be keen on donor aid effectiveness to avoid mismanagement of resources meant for nutritional interventions.

**Conclusion**

Overall, the cost analysis found that UNICEF with support from various donors takes the lead in financial contribution, both capital and recurrent towards implementation of the programme, followed by WFP and the Government of Kenya in that order. However, the government's 16% is a sign of commitment and ownership. Increased contributions are anticipated from the government thus gradually reduce dependence on donor funding for IMAM by investing in recurrent activities such as capacity building, procurement and distribution of RUTF, which is currently done by UNICEF and partners. Approximately 52% of UNICEF and WFP budget allocation was for purchase and distribution of RUTF and RUSF, on its own, RUTF consumed 24% of UNICEF's recurrent budget allocation. This affirms the widely held opinion on need for alternative to RUTF to save funds for other interventional activities.

Capital expenditures will decrease as activities such as protocol and guidelines developments are completed, except for occasional revisions. The same applies to activities such as training of trainers; renovation and construction of new health facilities and community outreach sites; purchase of medical equipment, among others since by definition these items or assets possess a life-span of up to five years or more before their productivity is re-assessed.

The per unit cost of managing a complicated case of SAM in inpatient treatment facilities amounts to US$84.54; equally, it costs US$93.79 to manage a non-complicated SAM case admitted to outpatient treatment facilities in 2011 and US$56.51 in the SFP. The per unit cost per beneficiary is equal to the per unit cost per cured child since there is no evidence to show otherwise. The most obvious and well vetted options for reducing costs are in finding a local means of securing the ready to use foods, however, there are a number of barriers to address such as patents, quality control and investment potential that have been explored to some extent but could be more aggressively pursued. Perhaps the greatest advantage is the potential for sustainability of interventions to address acute malnutrition and stimulation of local markets that could have a positive impact in Kenya.
CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

This chapter draws conclusions and proposes recommendations. The conclusions address the global/national TOR questions organized under OECD/DAC criteria. (Please see the TOR in the annexes.) The main conclusions are in italics and the corresponding recommendation(s) mentioned in parentheses and described in the matrix below.

7.1 Key Findings and Conclusions

Relevance and appropriateness

1. How well has the IMAM strategy evolved and to what extent did specific strategies/interventions respond to the local/national context, needs and priorities?

*The IMAM has been effective in treating admitted SAM cases in Kenya; the IMAM strategy is strengthened by being part of HINI.* IMAM was initiated in 2008 in Kenya accompanied by dissemination of national guidelines and training at the national and sub-national levels, enhancing sustainable integration within the regular health services. IMAM has evolved into being part of the 11 High Impact Nutrition Interventions (HINIs) adopted by the MoH in 2010 and should be scaled up along with the HINI. (Recommendation #1)

*The scale-up and integration of IMAM into the national health services as part of HINI have been facilitated by partnerships among government, UNICEF, WFP, WHO, UNHCR and implementing and development partners; capacity development has led to reduction in parallel services.* IMAM is implemented through the government health services; the focus of implementing partners is to build the capacity of the national health system rather than creating parallel services. A synergistic partnership building process has largely promoted the objectives of IMAM. The roles of NGOs in IMAM have evolved and now focus on the district rather than health facility level. Development of institutional capacity within the health system is on-going, as many health professionals still need to be trained along with equipping health facilities and procurement of supplies. (Recommendation #7)

*The developing policy, coordination and funding environments in Kenya are conducive to promoting national gains in nutrition and moving toward higher placement on the national agenda with regular funding sources.* There is a GoK endorsed Food Security and Nutrition Strategy, a National Nutrition Action Plan (2012-2017) and a nutrition strategy in draft. A cohesive national nutrition strategy is needed to tie together food security, WASH and health initiatives to ensure that causes of malnutrition are being strategically addressed. (Recommendation #2)

*Demand for IMAM as part of routine health services has increased due to its inclusion in district annual operational plans from 2008 onwards. Demand can be further enhanced through more effective community assessment and community sensitization in tandem with the on-going decentralization of the health system.* There is a need to devote resources to enhance the demand side through sensitising the communities and strengthening their confidence to demand services, based on assessments of which strategies will work the best. Decentralisation of health systems and a shift to resource decisions being made at sub-national levels could facilitate scale-up of IMAM, which tends to focus on creating demand at that level. Strategic planning for the integrated set of services under HINI may provide incentives for the community. The strategy for addressing acute malnutrition in urban areas was formulated upon studies and lessons which have led to strengthening nutrition services and gains in nutrition outcomes. (Recommendation #5)

2. How appropriate/adequate is the global guidance on IMAM/CMAM for local/national needs including various aspects related to needs assessment, programme planning/design, management/quality assurance, monitoring and evaluation?
The Kenya national guidelines for IMAM contain clear standardized treatment protocols but do not include enough guidance on community assessment, sensitization, integration into the health system and with other interventions, results based management, information systems and equity and gender equality. The national IMAM is based on the global CMAM model but the Kenya model needs clarification and placing upfront emphasis on community outreach activities (in tandem with the community health strategy) which tend to be the weakest in implementation. The relationships of IMAM to other initiatives such as IYCF and within the health system are not detailed nor is assessment, planning, coordination, and monitoring, e.g. with regard to the DHIS. Information on equity and gender to alert staff to possible issues are missing, e.g. reaching and following up the pastoralist communities. (Recommendation #4).

The lack of agreed standards and weak tracking for screening, relapse, readmissions, referrals and home visits makes performance evaluation difficult for these activities. Other data such as Length of Stay (LOS) and weight gain which are standardized are often not tracked. The Nutrition Action Plan (2012-2017) has defined indicators. Alternatively the IMAM guidelines will need to be updated and staff oriented accordingly. While Sphere minimum standards are important for measuring performance for SAM treatment and MAM management, it is challenging to assess other critical aspects, e.g. screening, as screening numbers are unclear. Kenya stakeholders need to decide what indicators can be tracked and how to manage those which are poorly tracked due to constraints difficult to overcome such as shortages of staff time, and whether standards are realistic. (Recommendations #3 and 4)

3. How adequate is the technical and organisational support that has been provided for planning and implementing IMAM?

Effective technical oversight has been provided through the partnerships among the MoPHS, MoMS, UNICEF, WFP, NGOs and the members of the Nutrition Technical Forum for developing IMAM as well as scaling up. In 2010, the countrywide scale-up of HINI (which includes IMAM) involved direct support to implementation in addition to nutrition information systems, planning and coordination, national level policy, advocacy and communication. There is substantial evidence that technical support, resulting from developing partnerships among government, NGOs and the UN, has promoted significant gains in process, coverage and outcomes. Challenges requiring stronger technical support include resource mobilization, assessment and planning, local production of RUTF, advocacy for stronger government support for nutrition, and various aspects of implementation, especially in districts and communities. (Recommendations #2, 9 and 14)

UNICEF is well placed to promote further intersectoral coordination around nutrition and urge Kenyan solutions to production of locally produced ready to use supplementary and therapeutic foods which are cost effective. UNICEF’s assistance along with the MoPHS has promoted a strong foundation for the nutrition sector response which stood out as the one of the most effective to the food security crisis. UNICEF scaled up resources rapidly with the appropriate technical expertise and strong coordination support for nutrition in the wake of the food security crisis. (Recommendation #2).

Effectiveness and coverage

4. To what extent have the expected outputs and outcomes been realised through the IMAM intervention? If there are shortfalls, what are the contributing factors?

The IMAM has succeeded on average in the sampled districts in meeting the Sphere minimum standards for treatment of SAM. Some districts did not meet the standards for default, weight gain and length of stay in the OTP. For SAM cases treated in the outpatient treatment facilities (OTPs), out of the total of 111,336 discharged children over the period between 2010 and 2011, 80.7% recovered, 1.5% died, and 13% defaulted. The
average length of stay was 59 days, with a relapse rate of 3.2%. Kisumu (17.3%) and Nairobi (19.3%) did not meet default standards; several districts exceeded recommended length of stay (LOS). Higher default is due mainly to weak household follow-up, and caretakers seeking work in the slums. LOS is affected by pressures from caretakers to allow their children to continue to receive RUTF and weak tracking of weight gain, so there should be debate on the practicality of this indicator and whether the reasons can be ascertained and addressed. (Recommendations #4, 5, 10)

**Inpatient treatment for SAM with complications in inpatient treatment facilities performed well but follow-up is weak.** The overall stabilisation rate for inpatient treatment was 84.6%, a death rate of 8.7%, a default rate of 1.4% and a relapse rate of 6.1%. Lack of a formal follow-up system to track stabilized children and ensure they return to outpatient treatment may contribute to relapses. (Recommendation #5)

**Developing a long term strategy to address MAM is a high priority given community and government reliance on external assistance for partial support, such as through using community resources to improve local production and greater use of vouchers and cash to stimulate the local economy.** For MAM management, performance met Sphere standards with an 80.5% cure rate, a death rate of 0.4% and a default rate of 14.5%. The average length of stay was 81 days, and the relapse rate was 3.7%. (Recommendation #2)

**On the job training (OJT) along with effective technical assistance and coordination have strengthened nutrition services.** Good practices include targeting IMAM caretakers in livelihood programmes and mother to mother support groups. Improvements are needed in availability of WASH and play space in the inpatient facilities, and if possible in the outpatient facilities and more dedication of staff time to counselling/health education. It is important for IMAM outcomes that the GoK supports the critical roles played by the Community Health Workers (CHWs) particularly in case finding, counselling and follow-up and provides them with incentives. (Recommendation #5)

5. What is the estimated coverage of IMAM services against the national level need?

**Data was not available or inconclusive regarding screening numbers limiting estimation of coverage; some children are missed in screening which may mean that they will not have the option of benefiting from IMAM services if they have acute malnutrition.** Overall coverage rates might indicate that regular screening does not reach all children and this was verified through qualitative discussions. Interviews suggest that screening is generally well organized aiming for total coverage, however, constraints include vast areas in the slums/rural, that cannot be covered by the CHWs, continuous migration, use of traditional healers, lack of transport in remote areas, and dearth of information about screening opportunities (Recommendation #5).

**Regarding geographical coverage, the presence of outpatient treatment for SAM in health facilities among five sample districts is an average of 44.7% but there was large variation among counties.** An inconsistency in the analysis was in the number of facilities offering outpatient treatment services as they varied from month to month; this average exceeds the estimations available for other countries (33% as per UNICEF’s Global SAM Treatment Update, 2011). Geographic coverage of health facilities providing outpatient treatment for SAM is below 50% with a wide range between counties, Kinango, Yatta, Kitui and Laikipia have been 10-20% coverage. By April 2012, facilities implementing HINI including IMAM were 66% (785) out of 1,184 targeted. This rose to 72% (856) by November 2012. (Recommendation #10).

**Treatment coverage surveys are needed to identify groups and areas without access to services.** Treatment coverage is difficult to estimate particularly in the wake of an emergency without structured treatment coverage surveys. The expected caseload was
difficult to estimate in 2011 as numbers of admissions rose with the food security crisis; higher rates of coverage were possible due to an influx of emergency funds. The admissions trends in the 8 sampled districts showed Turkana with admissions exceeding 100% (127%), followed by 43% in Kitui. (Recommendations #6, 10).

6. How developed and successful are the specific CMAM strategies (community outreach and mobilization, screening/enrolment, feeding, treatment, information management, follow up) and the interventions (as per the programme logic model) in realizing overall programme objectives?

Continuing to strengthen community outreach could address challenges to referrals and admissions; transport and in/out migration need to be addressed as major performance management issues. Some aspects of community outreach have been strengthened through technical assistance and training. Community mobilization and sensitization through clinic visits, outreaches, and mass communication through radio and seminars has improved the uptake of nutrition practices of the community. A major problem is consistent transport from remote locations for caretakers, and another is the level of migration, which indicates that a tracing or tracking system would be helpful. Referrals require stronger follow-up to ensure that SAM cases are admitted (Recommendation #5).

Demand can be further enhanced through more effective community sensitization in tandem with the ongoing decentralization of the health system. Factual presentations may help to counter misconceptions, dependency on traditional healers, and fear of stigmas (Recommendation #5).

To promote efficiency and effectiveness of MAM management, coordination regarding rations is needed in camps where supplementary feeding and general food distribution target the same beneficiaries. In Kakuma refugee camp, the MAM cases receive supplementary foods that duplicate what they receive during the general food distribution, therefore some mothers opt not to collect their supplementary ration (Recommendation #10).

Despite a number of humanitarian information systems in Kenya, early warning information was not heeded in time to prevent a high incidence of acute malnutrition in 2011; the District Health Information System (DHIS) launched in 2011 has already provided timely data that has been useful in responding to malnutrition crises e.g. in the ASAL and Dadaab refugee camps. Efforts should be devoted to streamline analyses for early prevention and response and promote timely action by decision makers. Cases of SAM and MAM escalated rapidly in early 2011 far surpassing levels in 2009 and 2010, a situation which the community management approach seeks to prevent. (Recommendation #10).

Gains in efficiency and effectiveness could be realized through stronger joint assessments, monitoring and evaluations. The need for more evaluations was mentioned in regard to the IMAM and IYCF interventions by the GoK and UNICEF. The lack of joint assessment was noted by the IASC RTE of the response to the food security crisis. Long rains, short rains and SMART surveys are coordinated and implemented jointly, however, UNICEF and WFP at the national level are not seen to conduct joint field visits with the MoPHS although they are key partners in IMAM and such efforts would provide a good example for other agencies. (Recommendations # 2, 10)

The RUTF is generally well accepted by children, but efficient usage was hampered by sharing with siblings, leading to non-compliance, and relapses and longer stays under treatment. There is little national production of RUTF. Although there were no major issues on availability of RUTF that affected the pipeline, one of the key challenges in implementing IMAM was ensuring the availability and quality of RUTF in a timely manner and in the locations where it was needed. The high dependency of RUTF procurement on emergency
funding, which is short term, limits capacity building efforts for long term investment in local production. (Recommendation #16)

7. What is the contribution of the programme to national capacity-building among nutrition and health professionals and community workers, to policy and system/institutional development and to the engagement of the private sector and other key stakeholders? What conclusions can be drawn regarding the effectiveness of capacity building efforts?

The GoK has recognized the roles played by the CHWs in the health sector but they require incentives to motivate them to face the many challenges. Those that are volunteering contribute toward positive changes in communities as well toward achieving the MDGS and other strategic goals, but they face many challenges and require some motivation in terms of basic pay or incentives, which is an issue that is being addressed in other countries. CHWs need proper remuneration, lunch during the outreach activities, and more training opportunities. (Recommendation #5).

On the job training (OJT) has succeeded in helping staff members retain skills and is instrumental in the continuity of scale-up. However, CHWs and other health workers need more adjacent support to carry out their duties. The OJT has facilitated coaching and mentoring without leaving the workplace and may have surpassed the TOT in efficiency value. In addition to technical training, CHWs and other health workers need more support to reach children in their homes, increasing the efficiency of HINI interventions to reduce the implementation burden, and consolidating the reporting requirements, especially for those with limited report writing skills. (Recommendation #12).

The OJT requires a master plan and concomitant support from government for scale-up. The OJT is not sustainable without GoK support and as such it is part of the OJT model and this ensures support from the GoK. Sustainable activities, like repeat and specialized training and regular nutrition capacity assessment have to be based in a structured capacity plan. IMAM needs to be in job descriptions and within capacity of the community based agents of development; districts falling behind need extra attention. The strategy needs to factor in its dependency on nurses, with plans for their capacity development and time usage for nutrition programmes. (Recommendation #12)

8. What are the key successes in generating new knowledge by the programme? Are these well documented and disseminated within the country and outside? What are the knowledge gaps which still prevent expansion of services through larger investments in IMAM?

The Kenya IMAM has recorded and disseminated knowledge externally including in the CMAM conference in Addis Ababa, 2011, as one of 9 case studies. Internally knowledge could be more effectively shared through frequent reviews and evaluations. Knowledge gaps that plague the global community as well include how to effectively accomplish intersectoral coordination, how to improve cost effectiveness, and challenges of tracking children in the referral system. Research has been a prerequisite to starting the IMAM in urban areas. (Recommendations #10)

9. Are there any noteworthy good practices and lessons regarding overall IMAM effectiveness or the effectiveness of specific strategies, management modalities used?

Key lessons and good practices are highlighted throughout the text.

Efficiency and quality of services

10. How has the management aspect of IMAM evolved over time? How well understood and implemented are the current management mechanism including the roles and responsibilities of various staff and stakeholders?
(See Questions #1 and 16.)

11. How systematically have the funds been allocated/utilised across programme strategies/activities to realise programme objectives? If there are delays/deviations in fund utilisation, how were these justified and what are the implications for attaining programme objectives?

The rate of UNICEF fund disbursement was generally good but a significant challenge was the long time necessary for approval of project documents and signing of memoranda of understanding. This had a cost implication on account of delayed implementation of activities and rising cost of inputs with time. As well, co-financed projects take long to kick off, in case of delay to disburse funds by one of the co-donors. Partners ought to explore alternatives that can ensure timely implementation of interventions. (Recommendation #15).

12. What are per unit costs of IMAM in various contexts? Can any conclusions be drawn regarding cost-effectiveness/efficiency for treatment according to the IMAM?

In 2011, UNICEF’s contribution to the total IMAM cost accounted for 54% and WFP’s 30%, while the GoK contributed the remaining 16%; GoK infrastructure and equipment costs could not be estimated but is a substantial contribution. As per evaluation calculations, by cost category, UNICEF allocated more than the others for its capital and recurrent expenditures. RUTF accounted for 24% of the recurrent expenditure. Combined, UNICEF and WFP spent 52% recurrent expenditure on RUTF and RUSF. (Recommendation #16)

Whereas the per unit cost of outpatient and inpatient treatment of a child with SAM is not expected to vary much with scaling-up, the total cost will increase substantially with increased number of admissions and coverage. The per unit cost of managing inpatient treatment of SAM amounts to US$84.54, while it costs US$93.79 for outpatient treatment of SAM in 2011, and US$56.51 per child with MAM. Contextual cost comparisons were not possible of urban versus ASAL. (Recommendation #16).

13. How operational and effective are the coordination mechanisms at the country level (i.e. coordination by the Government, including different ministries and other implementing partners, stakeholders (other UN agencies, NGOs, donors, etc.)? If noticeable gaps are evident, how can they be addressed?

Coordinating forums are generally inclusive (including education and research bodies and at county/district level) and their impact has been significant for nutrition outcomes particularly in emergencies, however, intersectoral coordination requires strengthening at all levels to reflect national development strategies. The ICC is functioning well, and technical coordination within the MoPHS is strong with key bodies including the Infant and Young Child Feeding Steering Committee, National Micronutrient Deficiency Control Council, National Food Fortification Alliance and the Nutrition Technical Forum which incorporates all Cluster functions. A number of coordinating bodies were established at provincial and district levels, including the Provincial Health Stakeholders Forum, the District Health Stakeholders Forum and the Health Facility Committee and Community Health Committees. The GoK with support of donors and assistance agencies should facilitate joint sector planning by removing funding and planning constraints and through greater efforts to advocate for cross sector planning and funding. (Recommendation #11)

14. How timely and effective was UNICEF RO’s and HQ’s guidance and support in achieving overall goals and objectives of the programme? How successful was the coordination between NYHQ, RO and COs within UNICEF?
Agency voices at global level are not strong enough regarding addressing issues in MAM management and promoting equity in coverage outside of emergency response. 
(Recommendation #14)

Regional assistance has been effective in planning for scaling up and down in emergency and non-emergency scenarios; regional plans need to consider variations in national standards among countries that may have an impact in migration emergencies. 
(Recommendation #14)

15. To what extent does the service delivery meet expected quality standards? What factors have contributed to meeting quality standards? Where quality standards are not met, what are the key bottlenecks/constraints that need to be addressed in order to meet quality standards?
(See also Question #4 and #6.)

Quality of services at health facilities, including availability of equipment and supplies, trained staff and adherence to standards and guidance, was judged to be good in all sampled outpatient and inpatient treatment facilities. The national protocol for treatment of severe acute malnutrition, standard operating procedures and other relevant guidelines are in use in health facilities. Both outpatient and inpatient treatment facilities scored high in having well trained staff and adequate supplies of therapeutic formulas, RUTF and medicines. Quality of services at health facilities can be enhanced through improvements to some facilities in terms of WASH, play space, and ensuring staff have time to devote to counselling. 
(Recommendation #7)

IMAM sustainability and scaling up (country level)

16. What level of progress has been achieved to build the IMAM ownership by the Government and its integration in the national service health delivery system? What is the evidence regarding national and sub-national engagement and ownership of the IMAM? To what extent has national ownership of IMAM increased? What are the success factors and lessons learned? Where this has not occurred fully, what are the constraints and consequent lessons for the future? Is there any evidence of increased budgetary allocations at the national level?
(See Question #1)

Government ownership at all levels has improved through policy development, training and coordination, but sustainable integration in all aspects is still only partial; changes from the emergency means of operating require much stronger stakeholder buy-in. Promotion of sustainable integration will require setting standards and indicators for the integration process itself, analysing means among stakeholders to move from dependency on emergency funds, emergency response mechanisms and emergency standards to those of an on-going nationally driven programme which can successfully expand and contract. There have been small increases in recurrent costs support but IMAM within HINI is largely dependent on partner support; greater GoK financial input would indicate greater ownership. 
(Recommendation #3)

17. How feasible are the current interventions in terms of the ability to be sustained without direct technical/financial support by UNICEF and other agencies? What factors have supported or inhibited expansion and scale up of IMAM interventions?

Capacity and funding from government sources are not adequate to maintain IMAM. Currently IMAM is mainly funded by external donors. At the district levels, UNICEF and IPs have been working in close collaboration with District Health Management Teams (DHMTs) regarding issues such as setting up community units, recruitment of community
health workers, incentives, training and implementation in order to ensure that any community supported interventions are easily integrated into the national strategy once NGO partners exit. Availability of resources from UNICEF, other UN agencies, donors and IPs is the main factor for scaling-up IMAM country-wide. A major factor limiting expansion is the capacity of the health services including staffing shortages and frequent turnover. (Recommendation #15).

18. What are the issues and options related to the feasibility (administrative, institutional, technical, and financial) for replication and expansion? What are the risks related to sustainability that are related to discontinuation of external support? What plans/strategies/mecanism exists for phase out/closure?

There are currently numerous risks to the continuation of IMAM without external support, in terms of institutional capacity, technical assistance and funding, however, more potential will exist as decentralization progresses. At the district levels, UNICEF and NGO partners have been working in close collaboration with DMOH regarding issues such as setting up community units, recruitment of community health workers, incentives, training and implementation in order to ensure that any community supported interventions are easily integrated into the national strategy once NGO partners exit. (Recommendation #2, 14)

Impact (outcomes/potential impact)

19. Based on longitudinal data and other type of information, what conclusions can be drawn regarding the extent to which IMAM contributes to a long-term improvement in the quality of life of the children treated?

Presently, there is not enough data to verify a long term improvement in the quality of life of the children. IMAM started in 2008, and from 2010 it is part of the HINI package. In 2011 there was high incidence of acute malnutrition cases consecutive to the food security crisis despite prior implementation. It is therefore an intervention that has positive short term effects. Assessing long-term effects could be the focus of further investigations. (Recommendation #10).

20. How significantly has the programme contributed to either revitalize or place nutrition high on the national policy and developmental agenda?

Nutrition is not high on the national policy and development agenda as evidenced by the amount of GoK funding delegated. In 2008/09 nutrition commodity allocation amounted to 0.1% of the health budget allocated for commodities, while nutrition activities comprise only 0.5% of the health budget. The Food Security and Nutrition Strategy, and the related Food Security and Nutrition Policy (FSNP) developed in 2009 as well as the National Nutrition Action Plan (2012-2017) are major achievements, but there is lack of a comprehensive nutrition strategy and weak non-emergency funding for HINI. (Recommendation #1).

Cross-cutting issues

21. How effective is the vertical and horizontal coordination (involvement of various sectors) in planning and implementing IMAM? How strong is the national /sub-national engagement and ownership of IMAM (including national budget allocations)?

(See also Questions #1 and #16)

A key constraint to tackling causes of malnutrition is need for greater intersectoral coordination; UNICEF is ideally situated to promote greater intersectoral coordination. Intersectoral collaboration is being strengthened with support from the MoPHS Nutrition Coordinator and UNICEF has delegated a WASH officer to support the WASH/nutrition linkages for HINI. As co-lead of nutrition, education and WASH technical forums, UNICEF needs to exert stronger influence both globally and nationally to overcome administrative and
other barriers to intersectoral collaboration with appropriate ministries and partners. (Recommendation #11).

22. How adequate is the progress achieved in implementing a national policy on CMAM or in integrating IMAM components into existing policies? What more needs to be done? What lessons can be drawn?

(See Question #1)

23. How systematically has institutional capacity development been pursued at all levels for long term sustainability of the programme? What more needs to be done?

(See Question #7)

The GoK should allocate more resources to IMAM in order to ensure sustainability, by strengthening community based nutrition interventions and scale up support for technical capacities and competencies for health workers. There is no overarching national body for nutrition coordination across sectors, but the MoPHs provides technical coordination through the Nutrition Inter-Agency coordinating committee. The MoPHS also provided technical guidelines, standards and job-aids on all key technical areas and integrated key nutrition indicators within the HMIS. (Recommendation #1,12).

Good IMAM performance may be attributed partly to the adaptation of On-Job-Training (OJT) which has improved the quality of nutrition services offered by the health facility staff but more pre-service training is needed to prepare professionals to be efficient in IMAM service provision. Health workers complained of being overburdened as they are engaged in numerous other health activities. Pre-service training (PST) of medical and nursing teaching institutions and community education may not include nutrition and IMAM. If PST is strengthened, the role of OJT could be to update staff on the basic skills they already have, as well as to introduce new protocols and policies and could reduce reliance on external support. (Recommendation #12).

24. How adequate are the guidelines on various aspects of IMAM programming?

(Please see Question # 2)

25. To what extent the technical support provided by various agencies is well-coordinated and responds adequately/coherently to various programmatic needs?

(See see Question #3)

26. To what extent did gender equality exist in CMAM programmes in participation, decision making and access to CMAM services? Are there any issues related to gender, geographic or other form of equity in CMAM service delivery and access that are evident? What measures could be proposed to improve programme targeting?

Challenges affecting targeting and equity include emergency funding, remoteness of some health facilities, use of traditional medicine, possible stigmas of HIV focus in some centres, and insufficient community assessment to identify children who may be missed. Coverage responds to some degree to funding which is to a large extent forthcoming in emergencies and may focus on food insecure areas, thus attention needs to be drawn to other parts of the country and acute malnutrition that is prevalent there. HIV/AIDS focus in some IMAM sites may be a stigma to drawing other children to participate. Mobile IMAM coverage could not be ascertained at remote sites, some areas are not fully geographically covered. The depth and breadth of community assessments are not clear to identify minority ethnic or other possibly vulnerable groups such as those covered by traditional medicine. (Recommendation #13)

IMAM data is not always disaggregated by gender as recommended and more attention should be paid to explaining gender findings in surveys. Disaggregated data on IMAM services was not available to the evaluation team. Gender differences should be
explored and explained e.g. if more underweight and stunting occurs in boys as seems to be the case, the possible reasons tend to not be explored. (Recommendation #13)

### 7.2 Recommendations

The evaluation has determined that IMAM is relevant and effective in Kenya for treating severe acute malnutrition and puts forth the following priority recommendations to be addressed by the Government of Kenya, the MoH (MoPHS and MoMS), UNICEF, other UN agencies, implementing partners (IPs) and other partners and stakeholders in order to better serve acutely malnourished children.

<table>
<thead>
<tr>
<th>DETAILED RECOMMENDATIONS</th>
<th>Management responsibility</th>
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<tr>
<td><strong>Relevance – Policy, Integration, Standards, Guidelines</strong></td>
<td></td>
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<tr>
<td>1. Enhance Government of Kenya ownership and commitment to scaling up and strengthening integration of IMAM into national health services through allocation of more resources. Advocate for securing funding commitments for scaling up IMAM particularly within the integrated HINI. Explore integrated funding options among, for example, MDG and HIV AIDS funds.</td>
<td>The MoH and the Ministry of Finance should take the lead with technical support from UN Agencie and donors</td>
</tr>
<tr>
<td>2. Finalize the draft national nutrition strategy that outlines strategic priorities, ties together the various sectoral programmes and nutrition and health programmes that address the causes of malnutrition, into a master plan which identifies gaps and overlaps and confirms roles for nutrition authority and nutrition coordination. The strategy should encompass the National Nutrition Action Plan (2012) and set out a long term vision, define capacity needs and make budget commitments for nutrition interventions. The master plan should contain a long term strategy to address MAM to reduce community and government dependency on external assistance, such as through using community resources to improve local production and greater use of vouchers and cash to stimulate the local economy. The master plan should facilitate a joint preventive approach among the MoH, UN agencies and other stakeholders through joint activities such as assessments, monitoring, guideline development, and advocacy statements.</td>
<td>The GoK (MoH and its departments centrally and in the districts) should take the lead in coordination and with technical support from UNICEF, WFP, WHO, IPs, and Donors</td>
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<tr>
<td>3. Jointly identify constraints and develop a framework and results matrix for sustainable integration of IMAM within</td>
<td>The MoH should take the lead with technical</td>
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**4. Expand the national IMAM guidelines making reference to the other interventions or develop them as part of HINI guidelines:**

- **Develop the Kenya IMAM model** - Give more upfront emphasis to community outreach tied to the national community development strategy and the roles of the community units and CHVs.
- **Integrate the guidelines with IYCF, IMCI, etc.** - Broaden the perspective from a programme focus to the integrated approach, where associated programmes, actors, indicators, and outcomes are tied together conceptually and operationally for the health worker. Include the role of traditional medicine.
- **Explain IMAM management based on principles of results based management**, describing a community assessment and how it should be used, joint programme planning and who should be involved, promoting intersectoral coordination at the district and community levels, and means to monitor the programme qualitatively and through assessing treatment coverage.
- **Include information and monitoring systems** - The current training regarding the DHIS (possibly as a contribution to guidelines by the HIS) and information systems should be part of the guidelines so all health staff understands the need to strive for more accurate data recording.
- **Include equity and gender equality** - Equity and gender principles should be detailed in the guidelines as a section and mentioned throughout the guidance.
- **Offer suggestions as to how operational realities for staff may be addressed**, such as time savers, efficient means of report completion, and hints for combining tasks and where sources of support can be found.

**5. Support the health sector to refine and operationalize the community outreach package tied to the community strategy especially in districts where this is not yet operational along with developing guidelines for implementation of community outreach, and indicators for judging performance:**

- Determine clear linkages between IMAM and the other community interventions
- Define a community health activity package and determine an appropriate remuneration for CHWs
- Strengthening the community strategy at sub-National level by elaborating a well-defined mechanism for monitoring the household follow up activities

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**HINI into the national health services.** This should include the vision for sustainable integration and degree to which IMAM can practically be integrated; the roles of government and assistance agencies (toward standardization); investments to be made based on research and cost effectiveness including in human resources and ready to use therapeutic and supplementary products; performance standards reflecting long term expectations within the national health system; and plans for progression toward longer term funding.

**support from UNICEF, WHO, WFP and IPs.**

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**The MoH should take the lead in coordination with other ministries with technical support from UNICEF, WHO, WFP and development partners**

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**The MoH should take the lead in defining the community outreach package, in coordination with other ministries, other nutrition and child development programmes, and with technical support of**
- Improve data collection on screening and determine screening targets through better interpretation of data gathered via the nutrition surveillance system
- Involve traditional healers in the process of screening and referral of malnourished children
- Elaborate a well-defined mechanism for tracing referred children and ensuring that they are admitted, as well as tracking stabilized children from inpatient back to outpatient services
- Elaborate community sensitisation messages that adequately address the issue of family stigma related to having a malnourished child

**Effectiveness – Coverage and Quality of Services**

6. **Conduct and ensure funding for regular coverage assessments and surveys**
   - Determine groups and areas with no access to IMAM services and areas with low coverage
   - Update the geographic information and regularly capture data on new outpatient, inpatient and MAM management services in order to clearly determine geographic coverage and actions for improvement

7. **Improve quality of services and infrastructure where needed in outpatient and inpatient treatment facilities particularly through investment in WASH and play space.**

8. **Incorporate IMAM supplies (both equipment and RUTF) into the Kenya Medical supplies authority (KEMSA) as part of the basic essential care package**

9. **Strengthen supply and delivery services and increase reliability and sustainability in supply and delivery through a plan to build capacity in the government/MoH logistics system.**

**Cross-Cutting Issues**

10. **Continue to strengthen joint monitoring and evaluation**
    - Define a schedule for regular review and joint evaluation of the programme with management responses requested to enhance utilization
    - Develop and disseminate a simplified and standardised M&E tool that include both qualitative and quantitative information while tracking the performance indicators
    - Document the evaluation of effectiveness and coverage of services including analysis of barriers to service use
    - Uniformly disseminate information from the sites in a timely way which may affect further decision-making and planning

**UNICEF and IPs**

**Effectiveness – Coverage and Quality of Services**

- The MoH should take the lead with technical support from UNICEF

- The MoH should take the lead with technical support from UNICEF and in coordination with DHOs

- The MoH should take the lead with technical support from UNICEF, WFP, WHO and donors

- The GoK and MoH should take the lead with technical support from UNICEF, WFP, WHO, IPs and donors

- The MoH should take the lead with technical support from UNICEF, WFP, WHO, IPs and donors
11. **Use GoK, regional and global mechanisms to promote intersectoral coordination by overcoming administrative and other barriers.** UNICEF is ideally situated as co-lead of nutrition, education and WASH technical forums, to promote greater intersectoral coordination through national, regional and global forums. UNICEF needs to exert stronger influence both globally and nationally to overcome administrative and other barriers to intersectoral collaboration with appropriate ministries and partners.

GoK and UNICEF should take the lead nationally with UN agencies, IPs and donors and UNICEF regional and headquarters should lead the processes in those domains with similar actors.

12. **Incorporate nutrition training (including IMAM) curriculum into health workers training materials to ensure adequate pre-service training in nutrition and extend training and job-support to CHWs and community units**

- Include IMAM in pre-service training of Medical and nursing teaching institutions and community education
- Maintain a long-term in-service training including individual mentoring and refresher training sessions
- Scale-up the OJT and supervision activities
- Integrate and ensure permanent support and supervision for IMAM into the overall District supervisory responsibilities of the DMOH, rather than relying on NGO support system
- It is unclear whether nutrition capacity assessments are carried out on a regular basis to decide what human resources are needed at what level and what their functions are.
- Nutrition training needs to be given to the community units for implementation of the Community Strategy which are under development at present and in most districts lack adequate community level capacity.
- Progress on capacity development is inconsistent over districts and should be relevant to the scaling up of IMAM, thus it is necessary to ensure enhanced coverage of districts that may fall behind.
- CHWs need adjacent support to carry out their duties in addition to training, including more support to reach children in their homes, increasing the efficiency of integration of programmes to reduce the implementation burden, and consolidating the reporting requirements.

The GoK and MoH should take the lead with technical support from UNICEF, and Nutrition Technical Forum members

13. **Develop or use existing strategies and advocacy to ensure that standards for equity and gender equality are consistently addressed in community assessment, IMAM design, monitoring and reporting.** These include:

- Drawing attention to malnutrition in areas of the country not covered by emergency funding and HINI, children who do not use the national health system, and other children who may be missed in screening.
- Ensuring disaggregation of IMAM data and discussions of possible gender issues in reports and surveys.

The GoK and MoH should take the lead with technical support from UNICEF, and Nutrition Technical Forum members
14. Strengthen technical support for resource mobilization, assessment and planning in district/counties, enhancing nutrition technical support in counties and communities, advocating for greater evidence of government commitment to nutrition, and for more effective systems to allow scaling up for emergencies.

The GoK and MoH should take the lead with technical support from UNICEF (including regionally and globally), WFP, WHO, IPs and donors.

**Efficiency, Sustainability and Scaling Up**

15. Explore strategies for ensuring timely funding of IPs and implementation of IMAM interventions
   - Ensure GoK commitment for increasing its share of funding
   - Ensure donors commitment for funding and technical support to scale up

The MoH should take the lead the process, in collaboration with UNICEF.

16. Work with the private sector to determine the most cost effective and sustainable means to produce ready to use therapeutic and supplementary foods locally, such as by providing bank loans and other adapted incentives in this regard.

The GoK should lead with support from UNICEF and other development partners.
ANNEXES

Annex 1: Persons Consulted

Division of Nutrition, Ministry of Public Health and Sanitation
1. Terry Wefwafwa, Head Division of Nutrition
2. Valerie Wambani, Programme Officer, Emergency Nutrition
4. Brenda Akwanyi, Nutrition Sector Coordinator

UNICEF
5. Katrien Ghoos, Regional Nutrition Advisor, ESARO
6. Thowai Zai, Chief WASH Section, ESARO
7. Noreen Prendiville, Chief Nutrition Section, Kenya Country Office
10. Ruth Situma, Nutrition Specialist, Health Systems
11. Kibet Chirchir, Monitoring and Evaluation Specialist, Nutrition Section
12. Fredrick Donde, Programme Officer WASH, Kenya Country Office
14. Isa Achoba, Chief Strategic Planning and Monitoring and Evaluation

UN, Donors and NGOs
15. Yvonne Forsen, Head Nutrition/Vulnerability and Mapping (VAM) Unit, WFP
16. Jeff Marzilli, Regional VAM Advisor, WFP
17. Dr. John W. Burton, Health Coordinator, UNHCR
18. Nicholas Cox, Regional Advisor, USAID/OFDA/ECARO
19. George Ombris, Regional Programme Specialist, USAID/DCHA/OFDA
20. Millie Gadbois, Senior Agricultural Advisor, USAID
21. Dr. John Burton, Health Coordinator, UNHCR Branch Office for Kenya
22. Joy Kiruntimi, Nutrition Coordinator, ACF Nairobi
23. Thomas Ndabu, National Nutrition Programs Manager, International Medical Corps, Nairobi
24. Thatcher Ng’ong’a, Nutritionist, World Vision International, Turkana
25. Dr. Flora Bukania, Programme Manager, IRC Kakuma
26. Julie Kiprop, Nutrition Manager, IRC Kakuma
27. Kenneth Chege, Health Coordinator, Plan International Kilifi
28. Koki Kyalo, Deputy Director, Concern Worldwide
29. Irene Sebit, SOS Village Programme Manager

R&D/Private Sector
30. Peter Akomo, Food Technologist Manager, Valid Nutrition
31. CJ Jones, Country Manager, GAIN

Focus group discussions and key informant interviews

Nairobi County
Lea Toto Kibera: Manager, Nutritionist, Caregivers of beneficiaries and CHWs
SOS: Programme manager, Nutritionist, caregivers of beneficiaries and CHWs

Kajiado County
Kajiado district hospital: Nutritionist, Nurses
Mile 46: Nurse, CHWs

Kitui County
Kitui district hospital: Medical Doctor in charge of the children ward, clinician, Nutritionist, Nurse and caregivers of SAM, DNO and Acting DNO
**Kavisuni Catholic Dispensary:** Health facility staff, CHW and community leader, beneficiaries of SAM and MAM, laboratory technologist and nurse

**Kisumu County**
**Kisumu East District hospital:** Nutritionists, nurse, Caregivers of SAM  
**Pandpier KUAP/Magadi:** Health facility staff and CHWs, Caregivers of MAM  
**K-MET Obunga:** Health facility staff who include the Executive Director and Nutritionist, CHW

**Turkana County**
**Lodwar district hospital:** Medical Officer in charge of Turkana District, Nutritionist, Clinician, Public Health Officer, CHW and Caregivers of SAM and MAM, Project Officers Nutrition Support, Merlin Turkana  
**Kakuma refugee camp:** Health facility workers, CHP, Community leaders and Caregiver, Nutrition Programme Manager and volunteer nutrition assistant  
**Nayanaengikalalio Outreach program:** Caregivers of beneficiaries

**Samburu County**
**Maralal district hospital:** Nutritionist, CHW and Community leaders, caregivers of beneficiaries  
**Maralal Catholic dispensary:** Nurse, CHW and Caregivers of SAM and MAM beneficiaries

**Laikipia County**
**Nanyuki district hospital:** District Medical Officer, Nutritionist  
**Segera mission:** Clinician, CHW, Caregivers of beneficiaries

**Kilifi County**
**Kilifi district hospital:** Nutritionist, CHWs and Community leaders  
**Ganze dispensary:** Health facility staff, CHWs and Caregivers of beneficiaries
Annex 2: Documents consulted

Government of Kenya

2. Kenya Nutritional Care for Children in Urban Informal Settlements, briefing note, MoPHS.
14. Experience in scaling up IMAM in Arid rural areas and urban settings, presented by Valerie Wambani, MoPHS, CMAM/SUN conference held in Addis Ababa in November 2011.
UNICEF

27. ciYCN Fact Sheet for 2012, UNICEF.

Other

42. The Kap Survey For IYCF Pilot Strategies In Urban Slums Of Korogocho, Mukuru Njenga and Nyalenda, undertaken by Concern Worldwide (November 2011).
47. Falconer R, Should low income countries increase health system funding by increasing user fees. AMJGH Vol 2 Iss 1: http://www.almamata.net/journal/AMJGH_2_17_22.pdf

## Annex 3: Cost Analysis Tables

### Table 6.1.1: Recurrent and Capital Cost Items/Variables

<table>
<thead>
<tr>
<th>PARTNER</th>
<th>COST TYPE</th>
<th>VARIABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UNICEF &amp; WFP</strong></td>
<td><strong>RECURRENT</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Human resource</td>
<td>% staff time allocation Vs salary</td>
</tr>
<tr>
<td></td>
<td>Supplies &amp; logistics</td>
<td>RUTF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transport (%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RUSF Supplements &amp; transport</td>
</tr>
<tr>
<td></td>
<td>UNICEF PCAs</td>
<td>Amount disbursed</td>
</tr>
<tr>
<td></td>
<td>WFP LFA (PCA)</td>
<td>Amount disbursed</td>
</tr>
<tr>
<td></td>
<td>Capacity building training</td>
<td>IMAM training</td>
</tr>
<tr>
<td></td>
<td>Operations research</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Surveys</td>
</tr>
<tr>
<td><strong>GOVERNMENT</strong></td>
<td><strong>RECURRENT</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Human Resource</td>
<td>District and health facility level: % staff time service allocation in OTP, SC, SFP and community outreach): taking measurements; counselling; education sessions; clinical examinations; biological examination; reporting; preparation and distribution of SF rations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DNO as District focal point</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff in Division of Nutrition/Coordination</td>
</tr>
<tr>
<td></td>
<td>Medication for only mandatory treatment</td>
<td>Bacterial treatment: full dose of Amoxicillin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deworming: full dose of Albendazole or Mebendazole</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vitamin A/Folic acid</td>
</tr>
<tr>
<td><strong>CAPITAL</strong></td>
<td><strong>INFORMATION &amp; COMMUNICATION EQUIPMENT</strong></td>
<td>Computers for DNO, DRIO and division of nutrition, especially for management of IMAM data</td>
</tr>
</tbody>
</table>

---

88
Table 6.1.2: UNICEF Budget allocation, 2010/2011 by district (US$)

<table>
<thead>
<tr>
<th>Cost Type &amp; Items</th>
<th>Kajiado</th>
<th>Laikipia</th>
<th>Samburu</th>
<th>Turkana</th>
<th>Kitui</th>
<th>Kilifi</th>
<th>National</th>
<th>TOTAL (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAPITAL COST</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Anthropometric measurement and electronic equipments plus transport (15% of total)</td>
<td>29723</td>
<td>35505</td>
<td>13224</td>
<td>25658</td>
<td>26632</td>
<td>22574</td>
<td>27406</td>
<td>180724</td>
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<tr>
<td>2. Development of IMAM Protocol</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>29412</td>
<td>29412</td>
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<tr>
<td><strong>SUB-TOTAL</strong></td>
<td>29723</td>
<td>35505</td>
<td>13224</td>
<td>25658</td>
<td>26632</td>
<td>22574</td>
<td>210136</td>
<td></td>
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<tr>
<td><strong>RECURRENT COST</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Partnerships cost (PCAs)</td>
<td>0</td>
<td>336336</td>
<td>1044513</td>
<td>713486</td>
<td>43365</td>
<td>22772</td>
<td>0</td>
<td>2160473</td>
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<td>4. Staff (Kenya Country Office)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>133256</td>
<td>133256</td>
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<tr>
<td>5. Staff (NSO)</td>
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<td>11880</td>
<td>11880</td>
<td>22760</td>
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<td>11880</td>
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<td>82160</td>
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<tr>
<td><strong>SUB-TOTAL</strong></td>
<td>264253</td>
<td>441605</td>
<td>1146603</td>
<td>989777</td>
<td>155828</td>
<td>153958</td>
<td>133256</td>
<td>3285279</td>
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<td><strong>GRAND TOTAL (US$)</strong></td>
<td>293,976</td>
<td>477,110</td>
<td>1,159,827</td>
<td>1,015,435</td>
<td>182,460</td>
<td>176,532</td>
<td>190,075</td>
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Table 6.1.3: Government IMAM Budget Allocation by District in 2011 (US$)

<table>
<thead>
<tr>
<th>Cost Type /Item</th>
<th>Component /Item</th>
<th>Kitui</th>
<th>Kajiado</th>
<th>Kilifi</th>
<th>Laikipia</th>
<th>Samburu</th>
<th>Turkana</th>
<th>HQ</th>
<th>TOTAL (US$)</th>
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</thead>
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<tr>
<td>Recurrent</td>
<td>SC</td>
<td>568</td>
<td>1259</td>
<td>3832</td>
<td>1259</td>
<td>216</td>
<td>6269</td>
<td>0</td>
<td>13405</td>
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<tr>
<td></td>
<td>OTP</td>
<td>42884</td>
<td>42512</td>
<td>12849</td>
<td>40244</td>
<td>50373</td>
<td>339240</td>
<td>0</td>
<td>528104</td>
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<tr>
<td></td>
<td>SFP</td>
<td>62568</td>
<td>50514</td>
<td>14037</td>
<td>41668</td>
<td>58546</td>
<td>251227</td>
<td>0</td>
<td>478564</td>
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<tr>
<td></td>
<td>HQ Salary</td>
<td>0</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
<td>7454</td>
<td>7454</td>
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<td></td>
<td>Sub-Total</td>
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<td>94286</td>
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<td>7454</td>
<td>1027528</td>
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<td>Capital</td>
<td>Equipment/ Computers</td>
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<td>942</td>
<td>942</td>
<td>942</td>
<td>942</td>
<td>942</td>
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<td><strong>TOTAL</strong></td>
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<td>95228</td>
<td>31661</td>
<td>84114</td>
<td>110079</td>
<td>597679</td>
<td>8396</td>
<td>1034122</td>
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</table>
Government recurrent IMAM Budget Allocation (details considered in the analysis)

**Stabilization Centres**

**Variable 1: Staff time.** On average, SAM child in a stabilization centre consume about 70 minutes of staff, with an average stay of 8.4 days, translating to about 588 minutes of stay in SC before discharged to OTP. All the 990 admitted to SC consumed a total of 404.5 days of staff time cumulatively. With an average annual salary of Kshs 420,000 (US$5,604), therefore the unit cost in SC is about US$5.661 for offer services such as taking anthropometric measurements (5 minutes); counselling/education (20 minutes), clinical and biological examinations (20 minutes); preparation and administration of therapeutic milk (20 minutes); and reporting (5 minutes).

**Variable 2: Medication.** A dose of amoxicillin, mebendazole and vitamin A/Folic Acid costs US$0.6, US$2.71, and US$44.57 respectively per case/unit using UNICEF 2011 forecast. Therefore the 990 SAM children admitted in Inpatient treatment facilities in 2011 costed the government a total of US$13,405 to manage and treat.

**Outpatient Therapeutic Programme**

**Annex Variable 1: Staff time.** Staffs spent about 50 minutes cumulatively on every SAM child, with an average stay of 64.85 days in delivery of services such as taking anthropometric measurements (5 minutes); counselling/education (10 minutes); clinical and biological examinations (20 minutes); RUTF and or CSB distribution (10 minutes); and reporting (5 minutes). As a proportion of staff annual salary of Kshs 420,000, the 13501 SAM children admitted in OTP in 2011 spent Kshs 34,981,615 (US$421,465), equivalent to US$31.23 per case/unit.

**Variable 2: Medication.** A dose of amoxicillin, mebendazole and vitamin A/Folic Acid costs US$0.6, US$2.71, and US$44.57 respectively per case/unit as using UNICEF 2011 forecast. Therefore the 13501 SAM children admitted in OTP in 2011 cost the government a total of US$528,104 to manage and treat.

**Supplementary Feeding Programme**

**Variable: Staff time.** Staffs spent about 10 minutes to prepare and distribute RUSF, with an average and 112.6 days of stay. Using the same approach, this translates to US$10.84 per case/unit. Therefore it costs the government a total of US$478,564 to manage the 44148 MAM children admitted to SFP.

Table 6.1.4: SC Cost Estimate

<table>
<thead>
<tr>
<th>District, Admissions &amp; Estimated Cost</th>
<th>Per Unit Cost (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input variables</strong></td>
<td></td>
</tr>
<tr>
<td>Staff time</td>
<td>5.661</td>
</tr>
<tr>
<td>F75</td>
<td>26.5</td>
</tr>
<tr>
<td>F100</td>
<td>44.5</td>
</tr>
<tr>
<td>Amoxicillin</td>
<td>0.6</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>4.57</td>
</tr>
<tr>
<td>Mebendazole</td>
<td>2.71</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>84.541</td>
</tr>
<tr>
<td><strong>Kitui</strong></td>
<td>42</td>
</tr>
<tr>
<td><strong>Kajiado</strong></td>
<td>93</td>
</tr>
<tr>
<td><strong>Kilifi</strong></td>
<td>283</td>
</tr>
<tr>
<td><strong>Laikipia</strong></td>
<td>93</td>
</tr>
<tr>
<td><strong>Samburu</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>Turkana</strong></td>
<td>463</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>990</td>
</tr>
</tbody>
</table>

| **84.541**                            | 3550.72            |
| **7862.31**                           | 23925.1            |
| **7862.31**                           | 1352.656           |
| **39142.48**                          | 83695.576          |
### Table 6.1.5: OTP Cost Estimate

<table>
<thead>
<tr>
<th>Cost of Managing SAM Children in OTP</th>
<th>District, Admissions &amp; Estimated Cost</th>
<th>Kitui</th>
<th>Kajiado</th>
<th>Kilifi</th>
<th>Laikipia</th>
<th>Samburu</th>
<th>Turkana</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1094</td>
<td>1087</td>
<td>329</td>
<td>1029</td>
<td>1288</td>
<td>8674</td>
<td>13501</td>
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</table>

**Inputs/Variables**

<table>
<thead>
<tr>
<th>Per Unit Cost (US$)</th>
<th>Staff time</th>
<th>RUTF</th>
<th>Amoxicillin</th>
<th>Vitamin A</th>
<th>Mebendazole</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.23</td>
<td>34264.08</td>
<td>33947.01</td>
<td>10274.67</td>
<td>32135.67</td>
<td>40224</td>
</tr>
<tr>
<td>54.68</td>
<td>59819.92</td>
<td>59437.16</td>
<td>17987.72</td>
<td>56265.72</td>
<td>70427.84</td>
</tr>
<tr>
<td>0.6</td>
<td>656.4</td>
<td>652.2</td>
<td>179.4</td>
<td>617.4</td>
<td>772.8</td>
</tr>
<tr>
<td>4.57</td>
<td>4999.58</td>
<td>4967.59</td>
<td>1503.53</td>
<td>4702.53</td>
<td>5886.16</td>
</tr>
<tr>
<td>2.71</td>
<td>2964.74</td>
<td>2945.77</td>
<td>891.59</td>
<td>2788.59</td>
<td>3490.48</td>
</tr>
<tr>
<td>93.79</td>
<td>102704.72</td>
<td>101949.73</td>
<td>30836.91</td>
<td>96509.91</td>
<td>120801.28</td>
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</table>

### Table 6.1.6: SFP Cost Estimate

<table>
<thead>
<tr>
<th>Cost of Managing MAM children in SFP</th>
<th>District, Admissions &amp; Estimated Cost</th>
<th>Kitui</th>
<th>Kajiado</th>
<th>Kilifi</th>
<th>Laikipia</th>
<th>Samburu</th>
<th>Turkana</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5772</td>
<td>4660</td>
<td>1295</td>
<td>3844</td>
<td>5401</td>
<td>23176</td>
<td>44148</td>
</tr>
</tbody>
</table>

**Input**

<table>
<thead>
<tr>
<th>Per Unit Cost (US$)</th>
<th>Staff time</th>
<th>RUSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.84</td>
<td>62568.48</td>
<td>203,957</td>
</tr>
<tr>
<td>45.67</td>
<td>295,443</td>
<td>441,187</td>
</tr>
<tr>
<td>56.51</td>
<td>266525.48</td>
<td>64919.8</td>
</tr>
</tbody>
</table>

| | 14037.8 | 41668.84 | 58546.84 | 251227.84 | 478564.2 |
| | 50,882 | 64,439 | 441,187 | 862,416 | 1,918,324 |
| | 62568.48 | 345957.4 | 64919.8 | 106107.84 | 499733.84 | 1113643.8 | 2396888.2 |
Annex 4: Terms of Reference

UNICEF

TERMS OF REFERENCE

EVALUATION OF COMMUNITY MANAGEMENT OF ACUTE MALNUTRITION

Evaluation Office, New York

and

Nutrition Section, PD, New York

BACKGROUND AND RATIONALE

Severe acute malnutrition (SAM) threatens the survival of children under five years of age both in emergency and non-emergency settings. Recent estimates covering both emergency and non-emergency settings suggest that SAM affects about 20 million children under 5 years of age globally and contributes to nearly 1 million child death each year. With increased frequency and intensity of natural disasters and economic uncertainties around the globe, it is likely that a larger number of your children will remain affected by SAM in the foreseeable future.

Management of severe acute malnutrition (SAM) has evolved as a major programme intervention over several decades but it had limited reach, as it was tied to lengthy in patient treatment in health facilities. Scaling up of programmes that addressed SAM was made possible just a few years ago when the advent of a ready to use therapeutic (RUTF) food and an innovative community-based approach made it possible to treat the majority of children in their homes. Large scale implementation of community management of severe acute malnutrition (CMAM) started recently after UN endorsement of the community-based approach in 2005.

CMAM strategy is comprehensive and covers both demand and supply aspects. The enabling environment component encompasses the policies, commitment of funds, coordination and technical support available to MoH and programme implementers. Access to services is meant to address both inpatient and outpatient components for treatment and suggests linkages with formal and informal healthcare and community based organizations or systems. Access to CMAM supplies is identified as critical and includes both essential drugs and RUTFs usually requiring long-term donor commitment if beyond the capacity of governments. Service quality includes establishment of adequate guidelines, support and supervision for staff and monitoring and evaluation components. The competencies component is meant to address issues of training and support, as well as on-site monitoring and communication outlets through which practitioners can share experience.

UNICEF has made significant investments in a number of countries to scale up treatment of severe acute malnourished children through CMAM initiatives. Direct country-level support provided by UNICEF over the last 3 years has helped 42 countries to implement community based approach. Ethiopia, Niger, Sudan, Chad, Somalia and Pakistan are among countries where community-based management of acute malnutrition (CMAM) is most advanced. Currently UNICEF procures around 8,000 MT of RUTF which represents an investment in therapeutic feeding of 30 million dollars a year. Field screening methods have been streamlined to allow community health workers to easily identify children who are severely malnourished using anthropometric measurements of mid-upper arm circumference (MUAC).

To consolidate the achievements made and to further enhance and expand CMAM services, there is a need to generate concrete evidence on how well the global as well as country level strategies have
worked including their acceptance and ownership in various contexts, appropriateness of investments in capacity development and supply components. Likewise, appropriate methodologies to assess coverage are required as integral part of the planning and result monitoring. Strengthening of regional and local technical capacity both of UNICEF staff and implementing partners has been identified as a key issue that needs to be examined systematically. In addition, the adequacy of information and surveillance systems and their use in progress monitoring and decision-making need to be reviewed systematically to inform programme strengthening and expansion.

In most countries, CMAM is implemented by both government and NGOs with support from UNICEF and a host of other partners. In recent years, several reviews of CMAM have been conducted (AED 2009, AED 2008) however, there is a lack of evaluations which examine all key aspects of CMAM programming and programme effectiveness, efficiency, sustainability and scale up issues comprehensively. The proposed evaluation aims to fill this gap thorough a comprehensive assessment of CMAM in 3 countries and drawing synthesized lessons and findings for use by national governments, UN agencies, NGOs and other stakeholders.

**PURPOSE AND USE**

The proposed evaluation aims at strengthening of on-going and future CMAM programmes by systematically generating and disseminating evidence on CMAM experiences from 3 countries through the use of both qualitative and quantitative information related to processes, outputs, outcomes (including adherence to global standards and quality of services), coverage and scaling up options. The lessons and recommendations from the evaluation will be used by national governments, UN agencies, donors, NGOs for strengthening existing programmes as well as for advocating for leveraging resources for effective CMAM strategies and interventions in areas in need. The specific objectives of the evaluation are as follows:

a) To undertake analytical assessment of the progress achieved in implementing CMAM globally with detailed assessment in 3 case study countries to identify key successes, good practices, and gaps / constraints that need to be addressed.

b) To examine CMAM programme performance in the case study countries using standard OECD / DAC criteria of programme relevance/appropriateness, efficiency and quality of services, effectiveness, impact (potential) and sustainability.

c) To examine the effectiveness of related cross-cutting issues such as coordination and management; gender and other forms of equity; capacity development; advocacy and policy development; and information/data management.

d) To document good practices and generate evidence-based lessons and recommendations to strengthen on-going efforts towards expansion of CMAM coverage in countries in need and for strengthening global /regional level guidance and support.

The timing of the evaluation is scheduled to inform UNICEF planning process, to share good practices globally, and to undertake corrective measures and programmatic shifts in various contexts. At the global level, the findings and recommendations will be used for developing new/revised nutrition in emergencies / CMAM policy and technical guidance and for further advocacy and fundraising efforts. At the country level, the country specific recommendations will be used in designing, planning and implementing the most equitable and effective emergency nutrition programmes at the national level.

**EVALUATION SCOPE AND FOCUS**

The primary focus of the evaluation is to examine overall CMAM programme results and processes at the country level and to generate forward looking lessons and recommendations for strengthening and expanding planning and implementation of CMAM in needy areas. In addition, the evaluation will assess the adequacy of the global guidance and global/regional-level support and identify areas where improved guidance and support are needed. The evaluation will focus on a sample of 3
countries (including situation where CMAM has been implemented in response to a nutritional crises resulting from protracted long-term emergency) where CMAM programming has sufficiently matured to generate lessons that can be applied widely. It will examine processes and results related to all key components of CMAM namely a) community outreach; b) outpatient care for children with SAM without medical complications at decentralised health facilities and at home; c) inpatient care for children with SAM with medical complications or no appetite; and d) services for the management of moderate acute malnutrition (MAM). Given the diversity of country contexts, it may be necessary to have a slightly different TOR for each country, although the evaluation questions included in the general TOR will be common to all 3 countries.

The evaluation will generate evidence on “what works well” and “what does not work” on all key steps of the CMAM programme cycle covering community mobilization/awareness creation, case detection/screening/enrolment, treatment/feeding modality, and follow up processes. The evaluation will examine policy and programmatic aspects as well as management modalities and make recommendations to strengthen both aspects. More specifically, the evaluation will provide evidence-based analysis to answer the following questions:

**Programme relevance /appropriateness**

- How well has the overall CMAM programme strategy evolved and to what extent specific strategies/interventions respond to the local/national context, needs and priorities?
- How appropriate/adequate is the global guidance on CMAM for local/national needs including various aspects related to needs assessment, programme planning/design, management/quality assurance, monitoring and evaluation?
- How adequate is the technical and organisational support that has been provided for planning and implementing CMAM?

**Programme effectiveness and coverage**

- To what extent have the expected outputs and outcomes been realised through the CMAM programme? If there are shortfalls, what are the contributing factors? What is the estimated coverage of CMAM services against the national level need?
- How developed and successful are the specific CMAM strategies (community outreach and mobilisation, screening/enrolment, feeding, treatment, information management, follow up) and the interventions (as per the programme logic model) in realising overall programme objectives?
- What is the contribution of the programme to national capacity-building among nutrition and health professionals and community workers, to policy and system/institutional development and to the engagement of the private sector and other key stakeholders? What conclusions can be drawn regarding the effectiveness of capacity building efforts?
- What are the key successes in generating new knowledge by the programme? Are these well documented and disseminated within the country and outside? What are the knowledge gaps which still prevent expansion of services through larger investments in CMAM?
- Are there any noteworthy good practices and lessons regarding overall programme effectiveness or the effectiveness of specific strategies, management modalities used?

**Programme efficiency and quality of services**

- How has the management aspect of CMAM evolved over time? How well understood and implemented are the current management mechanism including the roles and responsibilities of various staff and stakeholders?
- How systematically have the funds been allocated/utilised across programme strategies/activities to realise programme objectives? If there are delays/deviations in fund utilisation, how were these justified and what are the implications for attaining programme objectives? What lessons and recommendations can be drawn for the future?
How operational and effective are the coordination mechanisms at the country level (i.e. coordination by the Government, including different ministries and other implementing partners, stakeholders (other UN agencies, NGOs, donors, etc.))? If noticeable gaps are evident, how can they be addressed?

How timely and effective was UNICEF RO’s and HQ’s guidance and support in achieving overall goals and objectives of the programme? How successful was the coordination between NYHQ, RO and COs within UNICEF?

To what extent does the service delivery meet expected quality standards? What factors have contributed to meeting quality standards? Where quality standards are not met, what are the key bottlenecks/constraints that need to be addressed in order to meet quality standards?

What are per unit costs of CMAM in various contexts? Can any conclusions be drawn regarding cost-effectiveness / efficiency for treatment according to CMAM programme in particular country contexts?

**Programme sustainability and scaling (country level)**

The evaluation will examine administrative, institutional, technical and financial sustainability and explore possible opportunities for expansion of effective CMAM interventions (drawing in addition from the other evaluation questions):

- What level of progress has been achieved to build CMAM programme’s ownership by the Government and its integration in the national service health delivery system?
- How feasible are the current interventions in terms of the ability to be sustained without direct technical/financial support by UNICEF and other agencies? What factors have supported or inhibited expansion and scale up of CMAM interventions?
- What are the issues and options related to the feasibility (administrative, institutional, technical, financial) for replication and expansion? What are the risks related to sustainability that are related to discontinuation of external support? What plans/strategies/mechanism exist for programme phase out/closure?

**Programme impact (outcomes / potential impact)**

- Based on longitudinal data and other type of information, what conclusions can be drawn regarding the extent to which the programme contribute to a long-term improvement in the quality of life of the children treated through CMAM?
- What is the evidence regarding national and sub-national engagement and ownership of the CMAM? To what extent has national ownership of CMAM programme increased? What are the success factors and lessons learned? Where this has not occurred fully, what are the constraints and consequent lessons for the future? Is there any evidence of increased budgetary allocations at the national level?
- How significantly has the programme contributed to either revitalize or place nutrition high on the national policy and developmental agenda?

**Cross-cutting issues**

- How effective is the vertical and horizontal coordination (involvement of various sectors) in planning and implementing CMAM? How strong is the national /sub-national engagement and ownership of CMAM programme (including national budget allocations)?
- How adequate is the progress achieved in implementing a national policy on CMAM or in integrating CMAM components into existing policies? What more needs to be done? What lessons can be drawn?
- How systematically has institutional capacity development been pursued at all levels for long term sustainability of the programme? What more needs to be done?
How adequate are the guidelines on various aspects of CMAM programming? To what extent the technical support provided by various agencies is well-coordinated and responds adequately/coherently to various programmatic needs?

To what extent gender equality existed in CMAM programmes in participation, decision making and access to CMAM services? Are there any issues related to gender, geographic or other form of equity in CMAM service delivery and access that are evident? What measures could be proposed to improve programme targeting?

EVALUATION APPROACH AND METHODS

The evaluation will be conducted in two phases. The first stage will involve an extensive inception phase based on secondary information sources and interviews with a few key staff in each country, and with selected global and regional nutrition advisors/experts. A detailed inception report will be prepared which will detail the evaluation scope and methods based on the information gathered during the first phase. The second phase will involve further investigation and preparation of the evaluation report to be delivered by end September, 2011. The evaluation will be guided by the global CMAM conceptual framework/strategy and the country specific CMAM logic models and results frameworks which will need to be discussed and made explicit in the initial stage of the evaluation. In addition, the evaluation will also need to apply a systems evaluation approach to examining CMAM implementation /management aspects.

Given the multi-dimensional focus of the evaluation, a multitude of methods will be used for information generation combining documentary review, interviews, field observation visits, and surveys as follows.

a) Review of secondary data and documents: A list of relevant documents together with electronic copies of key documents will be shared with the evaluation team during the inception phase. In addition, programme managers will provide data that are readily available from various sources. The data will be reviewed and analysed during the inception phase to determine the need for additional information and finalisation of the detailed evaluation methodology.

b) Interviews with key informants: Interviews will be conducted at several levels and in phases. A few key staff from the countries involved and global/regional advisors/experts will be interviewed during the inception phase. In the following, phase interviews will be conducted with additional experts and staff including local level personnel involved in managing and supporting the CMAM programme. Additional interviews will be conducted with policy makers and programme coordinators in the countries involved including sub-national level staff, UNICEF Representatives and/or deputies, nutrition programme managers and advisors at various level. Interviews will also be help with staff of other agencies who contribute to and partner in CMAM programmes globally and/or at the national level.

c) Field observation and focus group discussions with nutrition and health staff, participants/beneficiaries in the programme (CMAM service providers, CMAM decision/policy makers/NGOs, parents). When organising field visits and interviews, attention will be given to ensure gender balance, geographic distribution, representation of all population groups and representation of the stakeholders/duty bearers at all levels (policy/service providers/parents/community).

d) Use of baseline information. Each country office will be responsible to provide baseline information on malnutrition and the CMAM programme evolution in the country based on secondary data and information that is readily available.

e) There is no field level survey envisaged unless the inception phase recommends the need for a survey is essential for the evaluation. If a survey is justified, it will be budgeted separately. An internet
based survey to assess global level progress, challenges and needs related to CMAM may be necessary.

The evaluation is expected to draw out relevant comparisons where possible. This will require comparing CMAM programmes across various settings both in terms of institutional processes and performance. For such comparisons, the evaluators must be clear of what is to be considered as a “good” standard. Where possible the evaluation should identify good practices that will form the basis for quality design and assessment efforts in future CMAM programming.

EVALUATION MANAGEMENT / STAKEHOLDER PARTICIPATION

The evaluation will be managed as an independent evaluation by UNICEF’s Evaluation Office under the leadership of a Senior Evaluation Specialist. An Evaluation Advisory Group (EAG), chaired by a senior staff from PD, NYHQ and members from selected UNICEF CO/RO staff, national government counterparts, Nutrition Section, PD, NYHQ, HIV/AIDS Section and EMOPS will be established to ensure broad-based ownership of and support to the evaluation. The EAG will review and comment on the draft inception report and the draft evaluation reports and provide comments. The EAG will also be involved during the dissemination and management response phase of the evaluation. In the participating countries, evaluation reference group will be established to support the evaluation which will include Government (Ministry of Health in particular) officials.

As the main counterpart/client, Nutrition Section, PD will be responsible for information sharing and arranging meetings of the EAG. UNICEF COs will be responsible for providing relevant information at the regional and country level, providing access to relevant reports/statistics, organizing field visits, logistical support, organizing meeting with different stakeholders at the country level, and interacting with the national evaluation reference group.