Nutrition Brief: Experience from Democratic Republic of Congo

Strengthening integration of nutrition and iCCM

August 2019 www.mcsprogram.org

Formative Research: Evidence to Inform a Country Approach

In the Democratic Republic of the Congo (DRC), 43% of children under-five suffer from stunting, 8% are wasted, and 23% are underweight. The majority (60%) of children 6–59 months old are anemic (hemoglobin <11 grams/deciliter). Early initiation of breastfeeding and exclusive breastfeeding (EBF) for six months, complementary feeding, and continued breastfeeding are critical to children's growth, development, and health; yet, data from the 2013 Demographic and Health Survey (DHS) indicates that these practices are not optimal. Moreover, regarding the three major child illnesses contributing to under-five child mortality—malaria, diarrhea, and pneumonia—only about 40% of children with signs of fever, suspected pneumonia, or diarrhea are taken for facility-based treatment. National health statistics indicate that 40% of all outpatient visits are for suspected malaria.

In the DRC, the USAID-funded Maternal and Child Survival Program (MCSP) worked in collaboration with the Ministry of Health (MOH) to strengthen the national integrated management of childhood illness (IMCI) and integrated community case management (iCCM) strategies to support their rollout in Tshopo and Bas-Uélé provinces. ICCM guidelines primarily focus on the identification, treatment, and referral of children who have diarrhea, pneumonia, and/or malaria. The nutrition component of iCCM is limited to identification and referral for severe acute malnutrition (SAM), while the preventive aspects of nutrition—including infant and young child feeding (IYCF) practices—are weak and often not well integrated into iCCM. This should be in tandem with capacity building in IYCF for facility-based providers.

According to a Maternal and Child Health Integrated Program (MCHIP) report in December 2005, the MOH initiated iCCM and included treatment for malaria, ARIs, diarrhea, and acute malnutrition. In 2010, there were 716 iCCM sites covering a population estimated at more than 1.6 million. Subsequently, data from late 2017 reveal that after 12 years of sustained efforts, iCCM is implemented in 6,968 sites across 402 health zones. However, the quality and types of program approaches varied greatly by geographic area and partners' support and priorities, often leading to uneven and fragmented implementation. For nutrition, the iCCM strategy was not always implemented in line with WHO's protocol for the management of acute malnutrition and did not address preventive and curative aspects of nutrition, with insufficient linkages of clinical and community-based nutrition interventions. In 2016, a process to develop a National Strategic Plan for Child Health, covering the period 2016–2020, was launched by the MOH with support from several partners, including WHO, UNICEF, and USAID. The plan, which is in line with the National Health Development

Plan for the same period, includes prevention and treatment of childhood illnesses and iCCM as a basic strategy to increase access to treatment of malaria, pneumonia, diarrhea, and malnutrition.

MCSP, the MOH, the National Nutrition Program (*Programme National de Nutrition* or PRONANUT), and others have identified the need for strengthening nutrition within the iCCM strategy and ensuring it is aligned with local knowledge, beliefs, and practices. MCSP, in partnership with stakeholders, undertook a formative study to develop an approach to strengthen nutrition integration within iCCM in three MCSP-supported health zones including Yaleko, Yakusu, and Isangi. Local stakeholders were engaged throughout the process from the development of the protocol, to participation in the data analyses, and reflection on programmatic implications. It was critical that the engagement of implementers in real-time research and learning was part of this work, which is in line with the current global movement on institutionalizing community health. The formative research was based on an understanding of the realities of where people live and work and the knowledge, attitudes, and practices shaped by those realities.

This study had four main objectives:

1. Examine cultural beliefs and perceptions of IYCF, child illness, and care-seeking behavior for sick children.
2. Examine the extent of counseling on nutrition and iCCM given by health providers.
3. Understand roles of key influential family and community members.
4. Identify gaps and opportunities to strengthen nutrition counseling for caretakers of children under five years of age at the health facility and community.

In-depth interviews (IDIs) with 127 mothers, fathers, and grandmothers of children under-five were conducted to determine practices, beliefs, and perceptions regarding IYCF, child illness, and care-seeking behaviors. Data was collected on dietary intake via food frequency and nutritional status, inclusive of weight, length/height, and mid-upper arm circumference (MUAC). IDIs were conducted with facility-based health providers (nurses and doctors), and traditional healers. Eight focus group discussions (FGDs) were carried out with 56 community health workers (CHWs) who provide counseling (referred to as *relais promotionnels*) or treatment at community care sites (referred to as *relais communautaires*) for iCCM. These IDIs and FGDs were focused on the knowledge and perceptions of providers, as well as quality of counseling given to mothers and families on IYCF, child illness, and care practices.

Key Research Findings

- Breastfeeding had a very favorable image among communities in the study; mothers and families say breastmilk is the "best food" for babies and should be the only food until the child reaches six months old. Mothers wished to continue breastfeeding for two years or more. Most mothers gave colostrum; however, mothers were often unclear on the reason for doing so, and some stated colostrum was not "clean," as indicated by its yellowish color, likely due to little counseling on nutrition provided to women.

- Diminished quantity and quality of breastmilk was perceived to be associated with child illness in the first six months of life. Families said that quantity of breastmilk could be insufficient when mothers did not have enough to eat themselves and that quality could be reduced when mothers spaced feedings too far apart, ate taboo foods, or infected their babies with *kunde*[1]. Mothers' need to work in the field led to early introduction of foods before six months, as families gave other foods to babies crying from hunger while the mother was away.

- Porridge or *bouillie* is the first food children eat (introduced between three and six months), followed by soft and then harder foods, which are introduced progressively. Porridge is locally defined as thin and

[1] An illness of the breast, causing pain and requiring massage. May present as genital ulcers in the form of warts. This disease can be transmitted to the child during breastfeeding

watery, prepared with palm oil and flour of soy, plantain, cassava, or corn, or occasionally biscuits (cookies), as well as variable amounts of sugar.

- Children's diets in Tshopo Province were predominately fruits and vegetables, which comprise 34% of foods consumed on a daily basis (inclusive of fruits and vegetables rich in vitamin A). Carbohydrates, such as tubers (e.g., cassava, potatoes); thin, watery porridge; and watery soups with small bits of meat are the main features of diets of Congolese children 6-59 months of age. Daily intake of red meat was 8% of all foods on average. River fish was rarely eaten on a daily basis.

- The diet primarily lacked protein-rich animal source foods, and quantities of food consumed were small in comparison to the needs of young children. Frequency of meals was difficult to ascertain, as mothers are not always the only caretakers for young children (i.e. often cared for by older siblings) and therefore, it was also difficult to estimate the number of meals children are fed on a daily basis. Data showed some consumption of sweetened foods and warm/sweetened beverages, which displaced consumption of nutritious foods.

- Despite stunting affecting about 40% of children in DRC, there was a lack of recognition and awareness of it. Indeed, stunting often goes unrecognized in communities where short stature is the norm, as linear growth is not routinely assessed in primary health care settings and is difficult to recognize visually. Families rarely spoke of their own children being acutely malnourished—which is unsurprising, as this is a rare occurrence—but they often were able to describe its severe signs: changes in hair and skin color, swollen limbs and cheeks, *kwashiorkor*[2], listlessness, etc. Furthermore, these data suggest, alongside interpretations of in-country data collectors, that malnutrition (especially severe forms like *kwashiorkor*) is considered a shameful condition (associated with poverty), and therefore a reason to hide the child rather than seek care.

- When a child falls ill, families begin with home care and traditional medicine, avoiding a health care center unless required due to the associated expense. Families seek care from traditional and biomedical sources at the same time or one after the other in case of treatment failure, sometimes starting with modern medicine, and sometimes with traditional medicine. This appears to be true for malaria, diarrhea, and pneumonia, and the identification of acute malnutrition covered in iCCM. The choice of place of care depends on the type of disease, its severity, and especially cost.

- Traditional healers are accessible to families because they live nearby, take appointments at more flexible times than modern health providers, and are very flexible about payment.

- CHWs refer and accompany families to the health center and may provide some basic care for uncomplicated cases if they have the supplies. They appear to be underutilized for nutrition counseling, as home visits by CHWs were primarily for vaccines (often for polio), with few or any visits to provide general nutrition counseling, based on families' reported receipt of counseling or care from this cadre.

Recommendations from the Study Findings

The study team disseminated preliminary results at workshops bringing together national stakeholders in Kinshasa and provincial stakeholders in Kisangani in November and December 2017. Stakeholders included national and provincial level MOH staff, non-governmental organizations and implementing partners working in health and nutrition, and USAID mission staff. Attendees interpreted, analyzed, and questioned the findings, and discussed their implications for strengthening integration of nutrition into iCCM. Participants from both workshops formulated recommendations, which form the basis of those listed below and aim to strengthen integration of nutrition into iCCM programming. These recommendations for national and subnational levels are deemed relevant for continued roll out and strengthening of nutrition into iCCM in DRC.

---

[2] Locally defined as a severe form of malnutrition, caused by lack of food or neglect of children or "*lack of blood*"/anemia

National Level Recommendations

- Review and revise guidance, curricula, and support materials to strengthen nutrition counseling for IYCF, including increasing dietary diversity, meal frequency, quantities of food consumed, and feeding of foods and liquids during and after illness for sick children and integrating the management of SAM and moderate acute malnutrition (MAM) at community level. The country needs to strengthen the capacity of CHWs around IYCF counseling and in the management of SAM and MAM in the community, pending availability of supplies to treat acute malnutrition.

- Review, adapt, and revise existing social and behavior change communication (SBCC) materials to support optimal IYCF practices and counsel on challenges that mothers and families face. These challenges include the separation of mother and baby immediately after delivery and/or later once a mother returns to the field, perceptions of insufficient breastmilk, maintaining breastmilk supply, early introduction of foods and liquids before six months old, weak complementary feeding practices, and feeding practices during and after child illness, which can be conducted through well-child clinic consultations at under-five clinics and community-based activities.

- Advocate for strengthening nutrition within iCCM. All stakeholders at the national level should also advocate to prioritize:

    - Funding to strengthen nutrition and child health interventions at the facility and community level, including community care sites and CHWs. The funding should be inclusive of training facility and community providers to strengthen quality of counseling; updating, printing, and distributing associated counseling materials; and supportive supervision visits.

    - Adequate and reliable supplies of quality equipment, commodities, and drugs for facilities and community care sites.

    - The integration of IYCF, management of MAM, and management of uncomplicated SAM cases in community care sites. This would include ensuring quality IYCF counseling for children that are not malnourished yet have suboptimal feeding practices due to families' lack of knowledge or in response to child illness. In addition, supporting providers to implement correct screening and management of MAM and SAM according to treatment protocols, in addition to ensuring continued counseling on IYCF practices once children are remediated to prevent relapse.

Provincial and Health Zone Level Recommendations

- Disseminate the new national iCCM/nutrition policies and guidelines to strengthen IYCF counseling, management of MAM, and capacity of CHWs and health providers in the management of MAM and SAM.

- Strengthen health provider capacity (including that of CHWs) through training on IYCF, IMCI, iCCM and treatment of MAM and SAM.

- Equip health workers with updated SBCC materials, including key culturally relevant messages and illustrated counseling cards on IYCF practices (e.g., feeding during and after illness).

- Strengthen the preventive components of nutrition within iCCM using adapted counseling cards to assure facility- and community-based health workers are well equipped and trained to:

    - Avoid separation of mother and baby after delivery and assure early initiation of breastfeeding.

    - Counsel on early introduction of foods prior to six months of age and how it disrupts EBF practices.

    - Counsel and provide support on breastfeeding challenges, including counseling on perceptions of insufficient breastmilk linked to child and maternal illness, maintaining breastmilk supply, and expressing breastmilk during periods the mother is away.

- Counsel on appropriate complementary feeding practices with an emphasis on quantity, diversity, and frequency of foods to provide for children 6–23 months old.
- Counsel caregivers on feeding children during and after illness.

- Develop or collect local complementary feeding recipes to improve practices based on readily available local foods and cultural beliefs around these foods to increase dietary diversity, quantity of food consumed, frequency of meals, and protein intake. Use recipes during cooking demonstrations conducted in mother-to-mother support groups.
- Strengthen the quality of services and improve counseling on IYCF practices during contacts with caregivers, from well-child visits, to visits for sick children (within the context of case management), to community-level contact points (including home visits).
- Strengthen and maintain the skills of facility- (nurses) and community-based providers (CHWs) through supportive supervision and updated curricula.
- Target and strengthen engagement with key influencers—grandmothers, fathers, traditional healers, and other influential members of the community—to encourage good IYCF practices. Capitalize on and use existing community groups or establish mother-to-mother and community support groups to maximize community reach. Work with and support community organizations to create or strengthen community groups.
- Explore innovative ways to work alongside traditional healers. Health management teams should explore how they can facilitate and rationalize referral, encourage the dispensing of oral rehydration salts and zinc for simple cases of diarrhea, and provide nutrition advice for certain key IYCF practices, such as breastfeeding messages.
- Ensure consistent supply of supplementary foods for treatment of MAM and SAM by liaising with PRONANUT and other implementing partners and advocating for a steady supply at facility and community levels.

Application of Formative Study Findings in the Implementation of an Approach

Based on the findings and recommendations, the MOH IYCF counseling cards were adapted to the context in Tshopo province. MCSP supported the provincial and health zone teams to train facility and community health providers to counsel on IYCF. The nutrition activities were conducted in 25 health areas in health centers and communities. The integrated nutrition-iCCM approach (i.e. IYCF counseling and screening for acute malnutrition) was rolled out in 25 community sites in these health areas, implemented through IYCF support groups coupled with supportive supervision. There was no data on what occurred prior to roll out of the approach, data was not routinely collected at the community level. MCSP used supplemental forms to complement existing HMIS forms.

Achievements Following Roll Out of Integrated Approach

MCSP **reached over 45,000 children less than five years of age** with nutrition interventions in all program-supported iCCM sites and facilities, which included zinc supplementation as part of diarrhea treatment.

At the health facility level, following roll out of the integrated nutrition-iCCM approach, the following facility-based results were achieved at the 25 health facilities:

- **6,578 cases of sick children under-five were screened for acute malnutrition** (99% of cases seen): 255 MAM and 97 with SAM[3]. For the 1% not screened, those children were clinically very ill (i.e. vomiting, convulsions, or visibly emaciated) and were then referred, and not screened, according to the algorithm.

- **2,113 caretakers were counseled on IYCF during well-child visits**

- **1,749 women initiated breastfeeding within the first hour** (99% of women with live births)

At the community level, in 24 integrated nutrition–iCCM sites, the following results were achieved:

- **2,455 cases of sick children under five years of age were screened for malnutrition:** 6 children were identified with MAM and 4 with SAM

- **980 caretakers under two years of age were counseled on IYCF**

- **795 pregnant women were counseled on nutrition**

- **25 functional breastfeeding support groups** were formed

Challenges

Ensuring that monthly monitoring of activities at the health center level and in the community (community care site and village) and quarterly follow-up of activities by provincial supervisors and PRONANUT staff are carried out consistently and systematically in an integrated way were key challenges. Support is needed to continue to strengthen IYCF counseling skills of nurses and CHWs through refresher trainings on the revised IYCF counseling cards. Challenges remain with the integration of key nutrition indicators at all levels, including nutrition data related to IYCF and Nutrition Assessment, Counseling, and Support (NACS) in the national HMIS (DHIS2) at facility and community levels.

Way Forward

Community actors should be empowered and engaged to contribute to systems strengthening through service delivery and social and behavior change, as well as use of data for action. Routine data collection and reporting is an on-going challenge, due to complexity of data collection tools for CHWs to complete and could be streamlined in the future. Incorporating IYCF and NACS data elements into the national HMIS would reduce the burden of a parallel reporting system. It is critical to continue the strengthening of provider capacity and skills on quality IYCF counseling coupled with supportive supervision efforts. The government staff, who have been involved throughout the study and the pilot, expressed interest in continuing efforts in the following areas: strengthening counseling in IYCF and use of counseling cards, strengthening data from HMIS (collection and rollup), follow-up on a monthly basis via supportive supervision of health providers and development of village action plans with community action committees to include nutrition components.

This brief is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of the Cooperative Agreement AID-OAA-A-14-00028. The contents are the responsibility of the Maternal and Child Survival Program and do not necessarily reflect the views of USAID or the United States Government.

[3] This was not a population-based sample, as we collected service statistic data from 25 sites, with sick children, using MUAC screening. The EDHS data examines weight for length/height (WFH) not MUAC, so the numbers could be different in that regard. In the DHS, for SAM (WFH < - 3.S.D.) the figure for Tshopo was 2.4% and WFH<-2 S.D. was 6.3%.