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Recommended Maternal Nutrition Priorities for Uganda

Findings from the Maternal Nutrition Operational Guidance Field Test



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Acronyms

| | |
|--------|--|
| ANC | antenatal care |
| CHW | community health worker |
| DHS | Demographic and Health Survey |
| EBF | exclusive breastfeeding |
| GOU | Government of Uganda |
| GWG | gestational weight gain |
| IFA | iron-folic acid |
| IYCF | infant and young child feeding |
| KCCA | Kampala Capital City Authority |
| MCHN | Maternal Child Health and Nutrition (Activity) |
| MIYCAN | maternal infant young child and adolescent nutrition |
| MOH | Ministry of Health |
| NGO | nongovernmental organization |
| PNC | postnatal care |
| SBC | social and behavior change |
| UNAP | Uganda Nutrition Action Plan |
| UNICEF | United Nations Children’s Fund |
| USAID | United States Agency for International Development |
| WHO | World Health Organization |

Executive Summary

Pregnancy and lactation are high-risk periods for maternal malnutrition, partly due to the physiological stress of extra nutrient demands. In Uganda, as in other low- and middle-income countries, maternal undernutrition and inadequate gestational weight gain (GWG) are prevalent and of growing concern. Adverse outcomes of maternal undernutrition and inadequate GWG may include preterm birth, fetal death, gestational diabetes, low birth weight, intrauterine growth retardation, pre-eclampsia, and complicated delivery, among others. Optimal nutrition is, therefore, necessary to maintain the mother’s health, help ensure a healthy delivery, and reduce the risk of birth defects, sub-optimal fetal development, and chronic health problems later in life.

In 2019, the U.S. Agency for International Development (USAID)-funded Maternal and Child Survival Program produced *Maternal Nutrition Operational Guidance: Program Considerations for Low- and Middle-Income Countries*. The guidance document is for use by government ministries, nongovernmental organizations (NGOs), and implementing partners when designing, implementing, and strengthening delivery of maternal nutrition interventions during pregnancy and lactation within the health system. USAID Advancing Nutrition facilitated the process of field testing the guidance document in Uganda in collaboration with the U.S. Agency for International Development Maternal Child Health and Nutrition (USAID MCHN) Activity. The two projects analyzed results from the field test to identify implementation priorities for maternal nutrition in Uganda, which align with and support the newly drafted *Maternal, Infant, Young Child and Adolescent Nutrition Guidelines*, developed by the Uganda Ministry of Health and partners. This report on maternal nutrition priorities is one output from the field test and it highlights findings and priority actions to improve maternal nutrition outcomes to be used by the Government of Uganda, USAID and other donors, NGOs, and implementing partners, including the MCHN Activity.

In this field test, we and the USAID MCHN Activity integrated the maternal nutrition guidance document and corresponding checklist into the USAID MCHN Activity program planning and baseline assessment. We synthesized the results of the desk review, key informant interviews, health facility assessments, and secondary data analysis. Based on these findings, we identified the following recommendations for strengthening service delivery and the enabling environment for maternal nutrition in Uganda, shown in table 1. We prioritized the recommendations, in collaboration with the USAID MCHN Activity, according to our understanding of essential, foundational needs, and feasible activities for improving maternal nutrition in Uganda.

Table 1: Recommended Maternal Nutrition Priorities and the Responsible Party

| Recommended Maternal Nutrition Priorities | Responsible |
|--|---|
| <ol style="list-style-type: none"> 1. Increase advocacy for maternal nutrition. 2. Conduct costing for nutrition activities, including maternal nutrition. 3. Strengthen use of nutrition data at the facility and community levels. 4. Strengthen multi-sectoral coordination between government and implementing partners at national and district levels. 5. Strengthen capacity of health facilities and community health workers to provide maternal nutrition services. | <ol style="list-style-type: none"> 1. Implementing partners, in support of national government 2. National government 3. Local government, with support from implementing partners 4. Implementing partners, in support of national and local government 5. National and local government, with support from implementing partners |

Introduction

Pregnancy and lactation are high-risk periods for maternal malnutrition due in part to the physiological stress of extra nutrient demands (SCN 2006). In Uganda, similar to other low- and middle-income countries, maternal undernutrition and inadequate gestational weight gain (GWG) are prevalent and of growing concern (Wanyama et al. 2018). Pregnancy is a critical stage of development when maternal nutrition strongly influences obstetric and neonatal outcomes (Kramer 2003). Adverse outcomes of maternal undernutrition and inadequate GWG may include preterm birth, fetal deaths, gestational diabetes, low birth weight, intrauterine growth retardation, pre-eclampsia, and complicated deliveries, among others. Optimal nutrition during pregnancy and lactation is necessary to maintain the health of the mother, ensure a healthy delivery, and reduce the risk of birth defects, sub-optimal fetal development, and chronic health problems later in life.

In Uganda, nutrient intake during pregnancy and lactation is often inadequate because of several barriers at the levels of the household, community, and enabling environment. Barriers often include poverty, food insecurity, gender discriminatory food allocation, food avoidances, and lack of access to adequate health services (MOH 2010). Addressing these barriers is critical to ensure adequate maternal nutrition during pregnancy and lactation. The Government of Uganda (GOU) and donors have ongoing efforts to prevent maternal undernutrition before conception, during pregnancy, and postnatal periods, including lactation. For example, new national guidelines—Maternal, Infant, Young Child, and Adolescent Nutrition (MIYCAN)—and the second *Uganda Nutrition Action Plan* are under development. Joint actions are also underway between partners and the GOU, including the World Bank-funded multi-sectoral food security and nutrition project, which aims to improve dietary diversity of women and children. However, addressing the growing concerns on maternal undernutrition and inadequate GWG will require further action.

Maternal Nutrition Operational Guidance Field Test

In 2019, the U.S. Agency for International Development (USAID)-funded Maternal and Child Survival Program produced *Maternal Nutrition Operational Guidance: Program Considerations for Low- and Middle-Income Countries*. The guidance document is for use by government ministries, nongovernmental organizations (NGOs), and implementing partners when designing, implementing, and strengthening the delivery of maternal nutrition interventions during pregnancy and lactation within the health system. USAID Advancing Nutrition facilitated the process of field testing the guidance document and corresponding checklist (see annex 1) in Uganda, in collaboration with the USAID Maternal Child Health and Nutrition (MCHN) Activity. The USAID MCHN Activity is a five-year program (January 2020 to December 2024) that was designed and funded by USAID/Uganda to improve maternal, newborn, child health, and nutrition outcomes in Uganda.

Through the field test, in collaboration with the USAID MCHN Activity, we identified implementation priorities for maternal nutrition in Uganda, which align with and support the newly drafted MIYCAN guidelines developed by the Uganda Ministry of Health (MOH) and partners. We incorporated aspects of the guidance document into the baseline assessment and program planning for the USAID MCHN Activity. The priorities outlined in this report for strengthening maternal nutrition service delivery and the enabling environment for maternal nutrition in Uganda are meant to inform the planning of the GOU; USAID; and other donors, partners, and NGOs implementing maternal nutrition interventions. We ranked the priorities in collaboration with the USAID MCHN Activity, according to our understanding of the essential, foundational, and feasible activities for improved maternal nutrition in Uganda.

Defining Maternal Nutrition Actions

For this report, actions to promote maternal nutrition include *maternal diet during pregnancy and lactation; monitoring weight gain during pregnancy; iron-folic acid (IFA) and calcium supplementation; anti-helminthic treatment; mobilizing women to attend antenatal care (ANC) visits early and regularly in pregnancy; and postnatal*

care (PNC), including support for early initiation of breastfeeding and exclusive breastfeeding (EBF). These actions correspond to the actions outlined in the maternal nutrition guidance and the GOU MIYCAN guidelines.

Methods

The field test was conducted with the USAID MCHN Activity's program planning and baseline assessment. To ensure the assessment and desk review included key elements of the maternal nutrition guidance and checklist, USAID Advancing Nutrition provided input into the project's baseline data assessment tools and desk review. Specifically, we supported their desk review by identifying key documents and maternal nutrition–related research questions and summarizing the desk review findings; provided input into key informant interview questionnaires and participated in relevant interviews with key stakeholders; provided input into health facility assessment tools; and suggested additional maternal nutrition–related indicators for secondary data analysis. Field test participants included program planners, implementers and sectoral heads, representatives of agencies and departments, and individuals (see annex 2). Finally, USAID Advancing Nutrition held a virtual workshop with key members of the USAID MCHN Activity team to reach consensus on maternal nutrition priorities for Uganda, a consultation to rank the priorities, and to identify which priorities could be incorporated into the USAID MCHN Activity's work plan.

Results from the Field Test: Identified Opportunities for Maternal Nutrition in Uganda

In this field test, we explored how the maternal nutrition guidance could be used to inform program planning by integrating the checklist into the USAID MCHN Activity program planning and baseline assessment. We synthesized the results of the desk review, key informant interviews, health facility assessments, and secondary data analysis by the following themes: the policy environment for maternal nutrition, maternal nutrition interventions and coverage, and factors affecting service delivery.

Policy Environment for Delivering Maternal Nutrition Interventions in Uganda

The GOU has made progress toward addressing malnutrition by strengthening policies for action. Key policy documents providing guidance on maternal nutrition are summarized in box 1. These guidelines provide the framework to standardize nutrition interventions nationally and to deliver high-quality nutrition interventions to priority vulnerable groups.

Several policy documents partially address maternal nutrition. However, some have not been officially approved and, during this field test, we found others were not fully implemented. For example, we found that PNC is not being implemented in government or private health facilities as outlined in the *Guidelines on Maternal Nutrition for Uganda*. We also noted that previous policy documents focus more on the first 1,000 days rather than a complete lifecycle approach, which would also include adolescent girls and all women of reproductive age.

The Uganda Nutrition Action Plan (UNAP) II, now finalized and endorsed, and the MIYCAN guidelines—finalized and awaiting endorsement—aim to address existing gaps. These two documents seek to support partners and implementers that provide nutrition care and support services to mothers, children, and adolescents. The MIYCAN will bridge identified gaps in nutrition programming by taking a lifecycle approach. Similarly, the UNAP II sets out to address malnutrition in the Ugandan population, including women of reproductive age. The MIYCAN covers three priority areas or themes: maternal nutrition, infant and young child feeding (IYCF), and adolescent nutrition. Through four maternal nutrition priority actions (box 2), the MIYCAN aims to provide the framework for reducing the prevalence of undernutrition, anemia, and overweight among pregnant women and breastfeeding mothers; and also to promote the provision of quality maternal nutrition services at the health facility and community levels.

Box 1. Government Legislation and Policy Guidelines Supporting Maternal Nutrition

- *Constitution of the Republic of Uganda, 1995*
- *Second National Health Policy, 2010*
- *Health Sector Development Plan 2015/16–2019/20*
- *Food and Nutrition Policy 2002*
- *Uganda Nutrition Action Plan I & II*
- *Policy Guidelines on IYCF, 2012*
- *Guidelines on Maternal Nutrition, 2010*

Box 2. MIYCAN Maternal Nutrition Priority Actions

1. Educate and counsel women on adoption of healthy eating behaviors during pregnancy and the breastfeeding period.
2. Promote physical activity/exercise during pregnancy and the breastfeeding period.
3. Prevent and control common micronutrient deficiencies.
4. Prevent and control malaria and hookworm infestations among pregnant women and breastfeeding mothers.

Similarly, the UNAP II seeks to promote optimal MIYCAN and to increase micronutrient intake among children and women of reproductive age. Key priority actions pertaining to maternal nutrition under this objective are summarized in box 3.

Box 3. UNAP II Maternal Nutrition Priority Actions

Objective 1: Increase access to and utilization of nutrition-specific services by children under 5 years of age, adolescent girls, pregnant and lactating women, and older persons

Strategy 1.1: Promote optimal MIYCAN practices

Priority Actions:

- Promote and support health and nutrition education to increase the level of awareness of good nutrition.
- Promote integration of nutrition services in all routine and outreach health services and programs targeting children and mothers.
- Manage nutrition for sick children, pregnant and lactating mothers, and other women of reproductive age.
- Integrate the management of severe and moderate acute malnutrition into routine health services.
- Promote utilization of antenatal and postnatal care services among all pregnant and lactating mothers to monitor child growth, and the health and nutrition status of both the mother and the child.
- Promote and support breastfeeding policies, programs, and initiatives.

Strategy 1.2: Promote micronutrient intake among children and women

Priority Actions:

- Provide iron-folic acid supplementation for pregnant women.
- Promote storage and consumption of iodized salt.
- Promote the consumption of iron-fortified staple foods.
- Promote the consumption of home-based fortified foods.

The MIYCAN and UNAP II both take evidence-based, multi-sectoral approaches and draw on lessons from the implementation of previous policies and guidelines in Uganda. The two documents provide a framework for integrating priority interventions to address maternal nutrition within existing services. This integration requires planning, implementation, linkages, partnerships, budgeting, and coordination among the various maternal nutrition stakeholders in Uganda—which, in turn, also require greater advocacy for investment in nutrition actions, as well as functional accountability mechanisms for delivering actions on maternal nutrition.

Maternal Nutrition Interventions and Coverage in Uganda

In 2008 and 2013, The Lancet Nutrition Series identified high-impact nutrition-specific, or direct interventions and nutrition-sensitive, or indirect interventions for improving maternal nutrition. Nutrition-specific interventions included IFA or multiple micronutrient supplementation, use of iodized salt, and calcium supplementation. Nutrition-sensitive interventions included deworming, use of insecticide-treated mosquito nets, and intermittent preventive treatment for malaria during pregnancy (Bhutta et al. 2008). Black et al. (2013) reported other important interventions with profound effects on maternal nutrition as well as child nutrition. These interventions include rest and balanced energy-protein supplementation (additional 700 kcal daily) during pregnancy, and improving literacy, empowering women, creating livelihoods, and investing in nutrition-friendly agriculture (Black et al. 2013).

In Uganda, many of these high-impact interventions are delivered through ANC and PNC clinics. The maternal nutrition guidelines include the following interventions: macronutrient deficiency control (through education and counseling), micronutrient deficiency control (e.g., IFA supplementation, vitamin A supplementation, education on diet diversification, deworming and malaria control, and promotion of fortified foods), nutritional assessments (including anthropometry and clinical and biochemical assessments), nutrition promotion and education, and nutrition counseling, among others (MOH 2010).

Antenatal Care Visits

Early, regular ANC visits during pregnancy can prevent maternal and perinatal deaths; and ANC coverage is routinely used to monitor progress toward reducing maternal and neonatal mortality (WHO 2018). ANC works to prevent conditions that may have negative effects on the mother and child's health, to treat complications, and to educate the mother and her partner on pregnancy, childbirth, and the postnatal period (Benova et al. 2018). ANC is a key entry point for pregnant women to receive a broad range of health promotion and preventive health services, including nutrition education and support (Arrish, Yeatman, and Williamson 2014; Szwajcer et al. 2009). However, only 70 percent of health facilities in Uganda offer ANC services (see table 2). The 2013 World Health Organization (WHO) SARA assessment found that all national referral and general hospitals provided ANC services; however, not all Health Center III's or HCII's provided these services (MOH 2013). As a matter of policy, Health Center II's may not provide comprehensive ANC services, but occasionally Health Center II's are the only facility available in a particular locality. In these cases, Health Center II's may be upgraded to provide ANC services. Private and urban facilities were less likely to provide ANC than public and rural facilities (MOH 2013). It is common in Uganda for private health facilities to be located in urban areas, and they are often more conveniently located and have shorter wait times. However, private facilities charge higher user fees than public facilities, which provide services at lower or no charge.

Table 2. Percentage of Facilities Offering ANC Services in Uganda, by Facility Type

| Facility Descriptor | Percentage |
|---------------------------------------|------------|
| Facility Level/Type | |
| National/Regional Referral Hospital | 100 |
| General Hospital and Health Center IV | 100 |
| Health Center III | 89 |
| Health Center II | 50 |
| Managing Authority | |
| Public | 76 |
| Private | 60 |
| Rural/Urban | |
| Urban | 62 |
| Rural | 76 |
| Total | 70 |

Source: WHO-SARA Assessment 2013

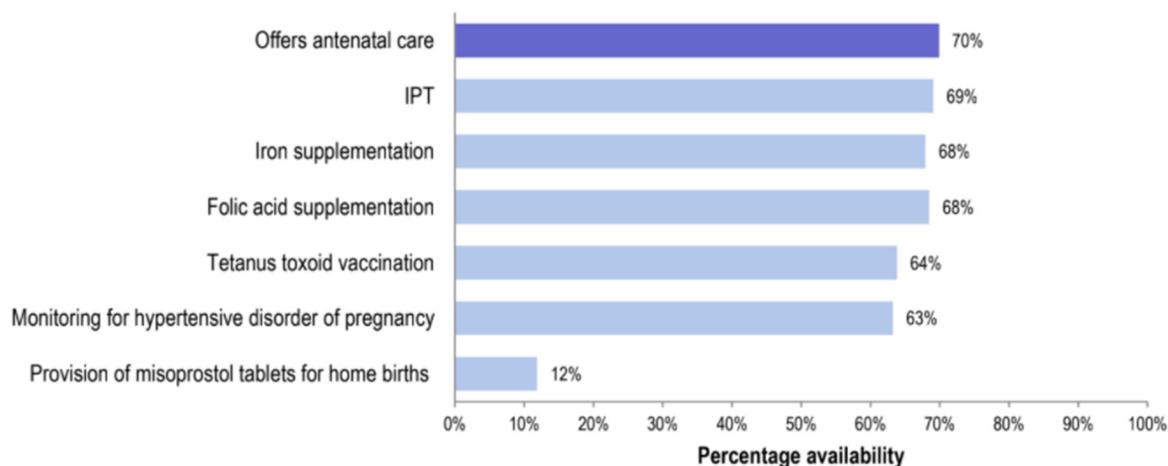
Current guidance in Uganda¹, which has not been updated to reflect WHO's 2016 recommendations, is that pregnant women attend a minimum of four ANC visits through the gestational period, with the first visit happening before 12 weeks (MOH 2010). The *2016 Uganda Demographic and Health Survey (DHS)* found that 98 percent of women ages 15–49 had at least one ANC visit (UBOS and ICF 2018). However, only 29 percent of women had their first ANC visit within the first trimester, and only 60 percent completed at least four visits (UBOS and ICF 2018).

Recent WHO recommendations state that women should complete at least eight ANC contacts, with the first contact before 12 weeks, and subsequent contacts at 20, 26, 30, 34, 36, 38, and 40 weeks of gestation (WHO 2016). The median gestational age at which Ugandan women make their first ANC contact is 4.7 months (in the second trimester), indicating that many Ugandan women do not benefit from a broad range of timely ANC services.

¹ This document reports adherence to the *2010 Maternal Nutrition Guidelines for Uganda*, which predate and are not completely aligned with WHO's 2016 guidelines.

In addition, health facilities do not comprehensively cover the broad range of ANC services, as recommended in the *2010 Maternal Nutrition Guidelines*. These guidelines recommend a physical assessment of anemia; and if women present with anemic pallor, they should receive higher doses of IFA and be referred to a well-equipped health facility (MOH 2010). The 2013 Service Availability and Readiness Assessment (SARA) Index for Uganda documented that 68 percent of facilities provided iron supplementation and 68 percent provided folic acid supplementation as part of ANC services; and 69 percent offered intermittent presumptive treatment for malaria (figure 1) (MOH 2013). However, it is important to note that IFA supplementation are the only nutrition-specific maternal nutrition services included in the SARA assessment. Other maternal nutrition interventions are reported elsewhere. According to the 2016 Demographic and Health Survey, among mothers attending ANC, 93 percent had a blood sample collected, 88 percent were weighed, 72 percent had a blood pressure reading, and only 39 percent had their urine sample taken (UBOS and ICF 2018).

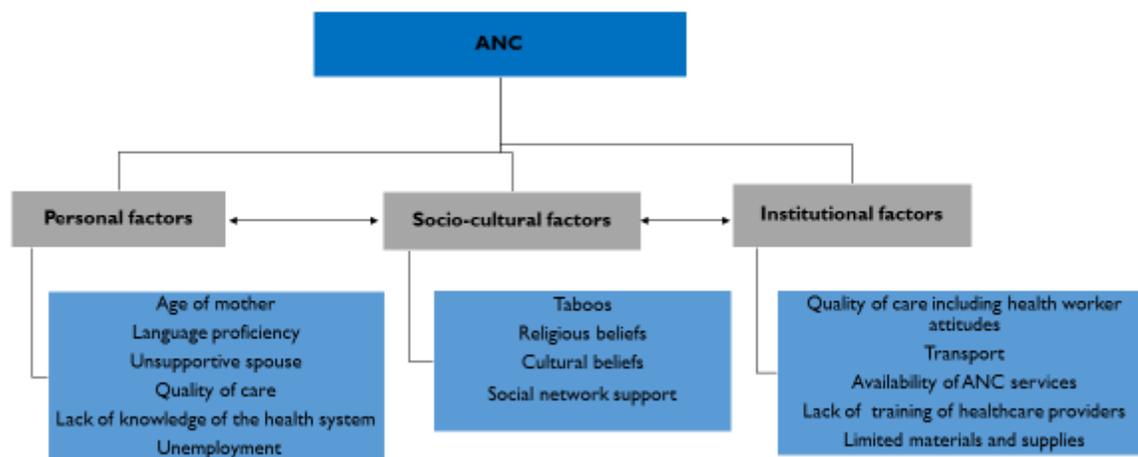
Figure 1. Percentage of Facilities Offering ANC, by Service



Source: WHO-SARA 2013

In a qualitative study, Atekyereza and Mubiru (2014) reported that social perceptions tied to pregnancy were key factors in the use of ANC services among pregnant women in Masaka, Uganda. Women perceived pregnancy as a valuable and unique encounter requiring special care, such as attending ANC for four or more recommended times, to avoid any complications that may lead to the loss of the pregnancy. On the other hand, women who had an unplanned pregnancy—against their volition or not—perceived pregnancy as a painful and regrettable experience and were more likely to report late or not turn up at all for ANC visits. These women included students who found themselves in a situation of fear, shock, and hate and did not want to go for ANC because they had not psychologically and socially accepted their pregnancy (Atekyereza and Mubiru 2014). Figure 2 shows personal, socio-cultural, and institutional barriers to ANC use.

Figure 2. Barriers to ANC Compliance



Sources: Atekyereza and Mubiru 2014; Nabugoomu et al, 2018; and UBOS and ICF 2018

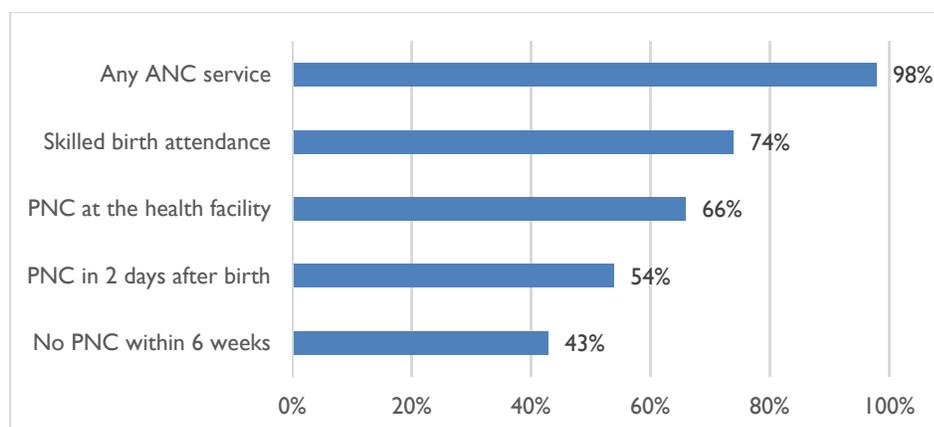
Other reasons for poor compliance with Uganda’s ANC guidelines (four or more ANC contacts) include young age, low educational level, lack of a paid job, poor language proficiency, poor support from a social network, poor quality of care, lack of knowledge of the health care system, and lack of support from the husband/partner, including difficulties in encouraging him to attend the ANC (Uldbjerg et al. 2020; Nabugoomu et al. 2018). Institutional barriers to ANC include poor quality of care, negative attitudes of health workers, socio-cultural practices not being successfully aligned to ANC, institutional structures and procedures at health centers (e.g., compulsory HIV testing, material requirements, and transportation), lack of training of health care providers, and limited resources for materials and supplies (Uldbjerg et al. 2020; Atekyereza and Mubiru 2014; Benova et al. 2018; and Nabugoomu et al. 2018).

Postnatal Care

Women may develop serious, life-threatening complications, including post-delivery hemorrhage and infections during the first six weeks after delivery. Early PNC is critical to mitigating these risks and reducing the maternal mortality rate. WHO and Uganda’s MOH recommend that all women who deliver from a health facility should receive PNC for at least the first 24 hours after delivery, and those who give birth outside a health facility should be referred for PNC at a health facility within 12 hours of delivery (UBOS and ICF 2018). When mothers are discharged from the hospital, they are expected to return for a check-up within seven days of delivery and at six weeks post-delivery. However, the MOH guidelines (MOH 2010) mention only the six weeks visit, encouraging health workers to provide mothers with IFA and nutrition assessments, with particular emphasis on a dietary assessment. The MOH guidelines also specify that mothers should be counseled during PNC on the importance of exclusive breastfeeding, and appropriate IYCF and growth promotion (MOH 2010).

According to the 2016 DHS, 74 percent of women in Uganda delivered with a skilled birth provider present, and 54 percent received postnatal care within two days of delivery (UBOS and ICF 2018). However, 43 percent of women did not receive any PNC in the six weeks after delivery, as seen in figure 3 (UBOS and ICF 2018). Further analysis of the 2016 DHS showed that the place of delivery was the most important determinant of whether a woman received PNC: women who delivered at a public (63 percent) or private (65 percent) health facility were much more likely to receive early PNC care than those who delivered at home (9 percent). Additionally, there was increased likelihood of early PNC for women with secondary education or higher compared with no education or primary education, women living in urban areas over rural areas, and women who had at least four ANC visits (Ndugga, Namiyonga, and Sebuwufu 2019).

Figure 3. Percentage of Mothers Receiving ANC, Delivery, and PNC Services



Adapted: (UBOS and ICF 2018)

The impact of low coverage of early PNC is reflected in the current high maternal mortality rate (336 maternal deaths per 100,000 live births) in Uganda (UBOS and ICF 2018). Given the urgent need to reduce the maternal mortality rate to 320 maternal deaths per 100,000 by 2020, as outlined in Uganda’s Health Sector Development Plan 2015/16–2019/20, providing appropriate PNC within the first two days following childbirth has the potential to avert maternal deaths through early identification of postnatal danger signs. However, early PNC as a critical aspect of maternal survival receives limited attention compared to pregnancy and skilled birth attendance, and most mothers do not receive PNC services from skilled health care providers (WHO 2010). This further suggests that the postpartum period is relatively neglected in the continuum of care and is a missing link in efforts to achieve safe motherhood.

Iron-Folic Acid Supplementation in Pregnancy

Evidence suggests that reducing anemia among mothers is important for reducing maternal mortality, and the distribution of IFA through the ANC program plays a crucial role. Improving the distribution of IFA through ANC and PNC programs are important strategies for preventing and controlling anemia in Uganda, and also for improving both the nutrition and health status, and the mental and physical capacity of women of reproductive age. The National Anemia Policy mandates that all pregnant women be given 60 mg of iron and 4 µg of folic acid supplementation daily for six months during pregnancy and six months postpartum (Mwadime et al. 2002). Although providing IFA supplements is integrated into routine ANC, the 2016 DHS found that only 23 percent of pregnant women in Uganda took iron tablets for at least 90 days, while 53 percent of women took less than 60 tablets and 12 percent of women did not take any iron tablets during pregnancy. The same report found that 38 percent of pregnant women and 34 percent of lactating women were anemic in 2016 (UBOS and ICF 2018).

Low demand for ANC services, including iron supplementation, and stockouts were cited as major constraints to adequate iron supplementation in Uganda. In addition, despite Uganda’s high prevalence of anemia, screening for anemia is not a standard practice during ANC visits, and is almost never done in other clinics, such as well-baby or immunization clinics. Poor financial resource allocation, inadequate human resources, and poor management and quality of care are possible factors that impede implementation of various integrated health packages in Uganda (SPRING 2017). These gaps show the need to strengthen the health system through routine monitoring and support for improved service delivery.

Figure 4 illustrates various determinants of IFA use among pregnant women. In a systematic review, Sendeku, Azeze, and Fenta (2020) found that receiving health education improved IFA supplementation adherence among pregnant women in Uganda.

Figure 4. Determinants of Knowledge, Attitudes, and Practices on IFA Use among Pregnant Women in Uganda



Sources: Senoga 2018; Nabugoomu et al. 2018; Atekyereza and Mubiru 2014; Mwadime et al. 2002; Sendeku, Azeze, and Fenta 2020.

Similarly, in a qualitative study, Senoga (2018) found that pregnant women attending ANC in Kampala Capital City Authority (KCCA) health centers had adequate knowledge, a positive attitude, and good adherence to IFA supplementation. The same study found that maternal education (achieving secondary education), marital status, and ANC attendance twice or more influenced positive IFA knowledge, attitudes, and practices. Providing strong support and encouraging mothers to attend antenatal care and increasing IFA supplementation awareness is associated with increased IFA use (Senoga 2018; Nabugoomu et al. 2018; Atekyereza and Mubiru 2014). In addition, IFA stockouts at health facilities is cited as a determinant, implying the need for greater effort to ensure access to IFA supplements for pregnant women (Mwadime et al. 2002; Atekyereza and Mubiru 2014).

Anti-Helminthic Treatment in Pregnancy

Helminth infections during pregnancy are associated with adverse outcomes, including maternal anemia, low birth weight, and perinatal mortality. A growing body of evidence shows the beneficial effect of deworming programs on any health outcome measure in either pregnant women or children under the age of 16 (Taylor-Robinson et al. 2015; Ndibazza et al. 2012). Accordingly, in line with WHO recommendations, the *Maternal Nutrition Guidelines for Uganda* recommend that pregnant women take deworming tablets (400 mg of albendazole) in the second and third trimesters. Deworming is currently a standard practice during ANC visits for all pregnant women (UBOS and ICF 2018), yet only 60 percent of pregnant women took deworming medication during their last pregnancy, according to the 2016 DHS. The reasons for low compliance in Uganda are not well documented, though interviewees during the field test cited frequent stockouts of medication.

Dietary Intake during Pregnancy and Lactation

Both the quality and quantity of food that mothers consume during pregnancy and lactation influence their health and that of their children. Malnutrition in women is associated with reduced productivity, greater susceptibility to infections, slower recovery from illness, and risk of negative pregnancy outcomes. Formative research conducted by the United Nations Children’s Fund (UNICEF) in 2015 found that maternal diets in Uganda are carbohydrate-rich, mostly consisting of foods from legumes (68 percent) and grains (67 percent). The study found that 50 percent of mothers of young children consume fruits and vegetables rich in vitamin A, while 30 percent consume animal source foods like meat, poultry, eggs,

cheese, or yogurt. In addition, 35 percent of pregnant and lactating mothers drink tea or coffee, which may compromise nutrient bio-availability (UNICEF 2015).

Mothers' ability to eat a diverse, nutritious diet during pregnancy is often limited by household access and availability, as seen in figure 5. Economic hardships and limited male support were observed as deterrents to food choice in Midwestern Uganda, even when mothers understood the need for certain foods during pregnancy (UNICEF 2015). Similarly, Nabugoomu et al. (2018) found that food choices of adolescent mothers in Eastern Uganda were affected by their parents' lack of funds. Further, cultural beliefs and taboos limit women's ability to access some nutrient-rich food during pregnancy and lactation. In many cultures, mothers believe that respecting food-based taboos will result in a healthy pregnancy (Atekyereza and Mubiru 2014). In Buganda, for example, taboos restrict pregnant women from eating certain foods or slaughtering animals, and not observing these taboos is believed to result in "amakiro" or pre-eclampsia. Similarly, in Karamoja, women are prohibited from eating the meat of dead animals, offal, and chicken, because they are believed to cause miscarriages (UNICEF 2015). Women report that non-observance of food taboos leads to general body weakness and being sickly, abnormal fetus movement, miscarriages, abdominal pains, malaria and fevers, weight loss, being pregnant beyond the gestation period of nine months, bleeding, and vaginal discharge, as well as sexually transmitted diseases (Atekyereza and Mubiru 2014).

Figure 5. Determinants of Food Choices during Pregnancy and Lactation



Sources: Nabugoomu et al. 2018; Atekyereza and Mubiru 2014; UNICEF 2015

Weight Management in Pregnancy

The 2010 MOH Maternal Nutrition Guidelines recommend weight management during pregnancy as a strategy to promote positive maternal outcomes. Health care providers are often urged to pay particular attention to the body weight and body mass index of women of reproductive age and, where appropriate, provide advice for modifying body weight by improving diet and lifestyle. However, data on tracking of weight management during pregnancy in Uganda is limited. In 2010, the MOH noted that a shortage of trained and motivated health care professionals, including midwives, compromised the provision of ANC services (MOH 2010). Due to this absence of a trained workforce, pregnant women in Uganda have minimal access to interventions that address maternal malnutrition as part of their ANC package (MOH 2010; Wanyama et al. 2018). Findings from the field test corroborated this observation; health workers reported that maternal nutrition was not a core part of their training, and only a handful received further instruction after pre-service training.

Early Initiation of Breastfeeding and Exclusive Breastfeeding

Early initiation of breastfeeding and exclusive breastfeeding have important benefits for both mother and child. Colostrum, the first breastmilk, has protective benefits for newborns due to antibodies it contains. The act of breastfeeding also strengthens the bond between mother and child and facilitates regular production of breastmilk (UBOS and ICF 2018). Current recommendations in Uganda are for newborns to be put to the breast immediately or within one hour after birth, and pre-lacteal feeding is discouraged. However, the 2016 DHS found that only two-thirds (66.6 percent) of Ugandan children were put to the breast within the first hour of birth. The same report showed disparities in proportions of children breastfed in the first hour of birth by place of delivery, region, and residence. For instance, compared to their urban counterparts, rural mothers were less likely to initiate breastfeeding within an hour (71 percent versus 64 percent). Children born in a health facility are more likely to be breastfed in the first hour of birth than are other children (68 percent versus 91 percent) (UBOS and ICF 2018).

Almost all Ugandan children are breastfed (98 percent), although exclusive breastfeeding among children under 6 months remains low (66 percent) (UBOS and ICF 2018). Nonetheless, Uganda is among the 23 countries to achieve EBF rates above 60 percent (UNICEF 2017). Given this achievement, Uganda seeks to achieve a 70 percent EBF rate, according to the UNAP II. Majumder and Samsuzzaman (2019) found that knowledge of breastfeeding among mothers was high, with most mothers aware of the essentials of breastfeeding, initiation of breastfeeding within one hour of birth, importance of colostrum, EBF until 6 months of age, and not giving pre-lacteal feed. They argued that their findings suggest great emphasis by health care providers on breastfeeding during ANC. However, further work remains to address barriers besides lack of knowledge, including competing household demands and lack of support, especially for younger mothers (Nabugoomu et al. 2018), or the need to return to work (Nankinga, Kwagala, and Walakira 2019).

Similar to other maternal nutrition interventions, a lack of quality counseling on early initiation of breastfeeding and exclusive breastfeeding is also likely. According to the Maternal Nutrition Guidelines, health care workers are encouraged to provide counseling and support to breastfeeding mothers during ANC and PNC. Several studies have shown that providing high-quality counseling using active listening and problem solving techniques during pregnancy not only improves knowledge but also influences EBF practices (Majumder and Samsuzzaman 2019; Nankinga, Kwagala, and Walakira 2019).

A UNICEF formative research study (2015) found that some cultural rites, like naming the child, delayed early initiation of breastfeeding and promoted pre-lacteal feeding in Abim, Karamoja. On some rare occasions, a child may be fed goat's milk and other fluids during the wait for the ritual of cord cutting and child naming ceremonies before the child is put on the breast. This can take up to three days if the child is born at the health facility. Other barriers also affect mothers' capacity to initiate breastfeeding, such as delivery after an operation, pain in the breast, and perception of having no breast milk immediately after delivery.

In 2015, UNICEF also observed that EBF was a challenge in Karamoja, Midwestern, and Acholi regions of Uganda, where mothers find it difficult to breastfeed on demand given their workload. Exclusive breastfeeding is influenced by a lack of food, additional pregnancies before the child is ready for weaning, and the perception that breastmilk is not forthcoming. In most communities, early introduction of other fluids and foods was reported to inhibit exclusive breastfeeding. Although mothers know it is important to exclusively breastfeed for six months, most of them stop at four months due to the challenges mentioned here (UNICEF 2015).

Women's Empowerment and Gender Equality

Gender inequality has negative impacts on the food security and nutritional status of pregnant and lactating women and their infants and young children. In many Ugandan cultures, women are responsible for domestic labor. Pregnant and non-pregnant mothers are responsible for household chores, including ensuring that their families have food to eat. Although some women report that men helped them to collect food, water, and firewood when they were pregnant or lactating (UNICEF 2015) a majority of

women report that men are not there to support them. Heavy domestic chores for mothers during pregnancy and lactation may impose stress on the mother and baby, putting the pregnancy at risk (Buen et al. 2020).

In addition, in some communities, women are required to seek permission or consult their husbands on such questions as where and when to visit the health facility, birth preparation, and use of household resources. Women from 19 districts of Uganda noted that men held decision-making power on use of income to purchase food, medicines, clothes for the baby, and transportation to ANC visits (UNICEF 2015). Women's lack of decision-making power and inequitable gender attitudes can lead to gender-based violence, with men's use of alcohol associated with increased gender-based violence. It is important to note that violence against pregnant and lactating women affects the health of both mother and child. Violence during breastfeeding may lead to sub-optimal breastfeeding practices as the mother's supply of breast milk may fall due to stress and violence. Women's social and economic standing, education, social status, age, and health all influence their level of autonomy and decision-making power. Increasing women's empowerment has positive effects on their own health and nutrition, as well that of their families. According to McNairn and Sethuraman (2011) and Kraft et al. (2014), women's education, economic standing, social status, age, health, and decision-making capacity relative to men's are significant determinants of maternal and child health and nutrition.

Factors Affecting Maternal Nutrition Service Delivery and Interventions

This section describes observations and perceptions from key informant interviews with program planners, implementers, and sectoral heads; representatives of agencies and departments; and individuals (see annex 2). Interviewees discussed maternal nutrition practices during planning and implementation; triggers/enhancers and barriers to delivering maternal nutrition interventions within sectors and programs (box 4); and what would convince practitioners to prioritize maternal nutrition in planning and programming in Uganda. The findings highlight cross-cutting outcomes at agency and sectoral levels to more easily inform the design of appropriate interventions.

Box 4. Sectors and Programs Included in the Review

- Ministry of Health
- Ministry of Agriculture Animal fisheries and Industry
- Ministry of Gender Labor and Social Development
- Ministry of Education
- Kampala Capital City Authority
- USAID-funded programs

Mainstreaming Nutrition in Programs

Mainstreaming refers to integration of nutrition services and activities into existing programs in sectors and agencies. At agency and sector levels, respondents noted that nutrition services and activities are not included in their action plans because they are not mainstreamed in relevant policy documents or resource mobilization tools, such as the Results-Based Financing Framework. This means that sectors and agencies cannot plan or finance maternal nutrition-related services or activities. However, in some cases, sectors and agencies (e.g., education, gender, and agriculture) are integrating maternal nutrition, but related activities are not directly coded as maternal nutrition services or activities. For instance, bio-fortification activities in the agriculture sector targeted households that included women of reproductive age; the Women's Empowerment Fund project in the Ministry of Gender also targets the same group. For mainstreaming to be effective, sector plans must clearly spell out nutrition services and activities to implementers and policy makers, citing the contributions of these services to their programming. This is

important for easy capture of maternal nutrition indicators and monitoring progress. Interviewees within various directorates of the KCCA cited HIV/AIDS programming as an example of successful mainstreaming where core programs within health, education, and social protection sectors have clear sectoral implementation plans integrating HIV/AIDS.

Staff Capacity to Deliver Nutrition Actions

The number of staff, and the competencies and skills of staff within sectors and agencies, affect their capacity to deliver nutrition-specific and/or nutrition-sensitive interventions. Respondents from sectors and agencies noted that delivery of nutrition services and activities largely depended on the competencies within their departments, agencies, or ministries. However, respondents from some sectors observed that there was limited attention specifically on maternal nutrition because of the absence of skilled personnel, or a specific person assigned to drive the nutrition agenda. Some sectors were operating at less than 50 percent staffing, further justifying their lack of action.

“We have no focal person for nutrition in this department, so it makes it hard for someone to focus on nutrition alone when there are competing departmental activities.”

- Sector staff, Kampala

At the health facility level, staff were available. However, some staff, such as nurses, are expected to deliver nutrition services and coordinate nutrition activities, in addition to their primary job duties, even though these nutrition duties were not stated in their job description and their training in nutrition is limited. Nurses are often assigned nutrition-related tasks in addition to what they perceive to be their day-to-day health facility roles, leading them to perceive nutrition work as extra, unpaid work on top of their already heavy workload. There is also a sentiment among health facility staff that nutrition project staff (i.e., non-government staff hired by NGOs to work in health facilities and run nutrition projects) are better remunerated than facility staff, who are also expected to contribute to the project’s outcomes. Nevertheless, some staff in nutrition units revealed that their motivation to deliver maternal nutrition services was due to their compassion for their clients and interest in the subject matter.

This field test also showed there was inadequate training on maternal nutrition among health facility staff. Most health workers said that they did not receive pre-service training on maternal nutrition. Any training they received was an in-service training conducted by partner or donor-funded nutrition projects (focusing specifically on project outcomes). Though facility staff interviewees reported that the MOH conducts focused training on different subject areas, they said they had not had any specific training on maternal nutrition in the two years preceding the field test. Respondents observed that the lack of training specific to maternal nutrition is heightening the gap in maternal nutrition skills and competencies between health facility workers and nutrition project staff.

Unlike sectors, implementing partners did not cite a lack of skills and competencies to deliver nutrition actions. However, some felt that there was a need for more staff on their teams to improve the coverage of interventions, which are spread across districts and regions.

“We have no challenges with competencies and skills. Our challenge is with numbers of staff. We cover several regions but there is a handful of us.”

- Program staff, Uganda

Resources and Resource Mobilization

Interviewees from sectors and agencies mentioned resources as major hindrances to delivery of nutrition actions. Resource mobilization in key sectors was poor, they said, and some sectors lacked resource mobilization strategies for nutrition. Interviewees noted the sectors’ lack of agency—

“We do not have any partners to implement nutrition interventions. Partners have not reached out to us.”

- Sectoral head

Some noted that sectoral plans were their resource mobilization tools. However, the absence of maternal nutrition interventions in their sectoral plans meant maternal nutrition actions could not be implemented.

Further, respondents cited lack of resources among the challenges they encountered in delivering maternal nutrition interventions. For instance, they said that inadequacy or absence of tools or procedures (e.g., test kits for hemoglobin, IFA supplements, social and behavior change [SBC] materials and guidelines, etc.) were an obstacle to delivering some maternal nutrition interventions. Some health workers noted that they did not do anemia testing or comprehensive nutrition counseling simply because the test kits and counseling materials were either expensive or not available in their departments or facilities. Public facilities also noted stockouts of Fansidar (a major drug used for malaria prophylaxis and treatment in pregnancy), IFA supplements, and deworming medications as major hindrances to delivering maternal nutrition interventions. Respondents also mentioned structural barriers to delivering maternal health interventions, including a lack of motorcycles to reach remote villages.

Coordination and Partnerships for Nutrition Interventions and Activities

Among non-government nutrition partners, coordination of nutrition interventions within implementation areas emerged as a key issue that needed strengthening and streamlining. They noted that it was important for local governments to do more thorough stakeholder mapping to avoid duplication of efforts and over-concentration of nutrition interventions in one locality. For example, partners noted overconcentration of nutrition activities in Moroto district, Karamoja region. They also observed that nutrition programming activities were concentrated in the Northern, Eastern, and Western districts, with some gap in the central region, and greater gaps in Kampala.

Data Capture and Analysis

Respondents cited data capture as a key challenge at all levels across sectors and agencies. They reported that poor quality of data, especially anthropometric data, was due in part to data collection being conducted by lower-level cadres in facilities, who often have little grasp of the standard operating procedures. Respondents also said data analysis is generally poor and conducted infrequently, except for anthropometry measures.

Although partners have attempted to train staff on data quality and analysis, respondents noted that this area still needs improvement. Even when data is available, insufficient human resources are available to interpret the data (e.g., often, only one person is deployed to manage data from all departments). Further, some data on maternal nutrition indicators—such as anthropometry and blood and urinary glucose levels during pregnancy—are still not being captured in the routine data registers provided for health facilities. However, new registers were developed in 2017 with support from USAID and partners, including an accompanying training manual. The revised registers include spaces for inputting data on anthropometry, blood pressure, elimination of mother-to-child transmission, maternal nutrition counseling, hemoglobin, blood sugar, intermittent preventive treatment of malaria in pregnancy dose, long-lasting insecticide-treated nets, mebendazole dose, skin-to-skin contact, discharge counseling, and IYCF counseling. It appears that the registers are not widely used; even when used in some facilities, it is unclear if the registers are being used correctly. In some cases, not all the indicators are being reported.

Coverage of Nutrition Services

Coverage of maternal nutrition interventions is still low, with inequitable access to services. At the sector level, respondents noted that interventions covered the general population at the national level, whereas partners had targeted the intervention areas. KCCA, in particular, reported reaching various health facilities within the five city divisions under their jurisdiction; however, their actions on community linkages were poor. Many of their maternal nutrition services were delivered through health facilities using the key contact points for maternal nutrition (e.g., outpatient department, ANC, maternity, and PNC clinics). By comparison, partners were limited to particular regions or districts of operation. They reported a wide coverage of districts, with some operating at only the health facility level, and others operating at the health facility and community levels. Partners reported strong community linkages and a desire to reach out to more mothers in the communities. At the community level, partners employed peer-to-peer groups, such mother-care groups, to improve coverage and diffusion of their interventions. A greater understanding about gaps in coverage is needed to ensure that all mothers can access services in a more equitable and sustainable manner.

Conclusion and Recommendations

This field test found that maternal nutrition interventions in Uganda do not adequately address malnutrition among women of reproductive age, although there are attempts to do so. Anemia remains high, diets are inadequate, and GWG is insufficiently addressed; all of these greatly contribute to the high rates of maternal malnutrition. Holistically addressing these emerging and persistent issues will go a long way to improving maternal nutrition outcomes in Uganda. Primary health care is essential to achieving universal health coverage, and it leads to a range of health and economic benefits. Thus, increasing coverage of high-quality maternal nutrition services and interventions through primary health care, especially for the most vulnerable, is the overarching recommendation to emerge from the field test. This will require improvements in service delivery and the enabling environment.

Based on the field test findings, we identified the following recommendations for strengthening service delivery and the enabling environment for maternal nutrition in Uganda. We prioritized the recommendations in collaboration with the USAID MCHN Activity, based on our understanding of essential, foundational needs, and feasible activities for improved maternal nutrition in Uganda.

Recommended Maternal Nutrition Priority Actions

The field test identified the need for maternal nutrition to be mainstreamed into the health system and for

Findings from this field test suggest the following recommendations are the top priorities to meet these needs. The priority actions are grouped by the primary responsible party.

Recommended Priority Actions for National Government

- **Conduct costing for nutrition activities, including maternal nutrition.** The first step in identifying gaps in capacity is to understand the cost of adequately providing maternal nutrition services and interventions at scale and where Uganda falls in terms of national investment. A complete costing exercise across nutrition activities has not yet been conducted. We recommend that implementing partners work with the national government to conduct a nutrition costing exercise—starting with maternal nutrition—which will facilitate advocacy for additional investment and resource mobilization in nutrition. The finalization of MIYCAN and UNAP II are an opportune time for this exercise.
 - **Responsible:** National government, with support from implementing partners
- **Strengthen capacity of health facilities and community health workers to provide maternal nutrition services as part of ANC, delivery care, and PNC.** Currently, the health workforce has limited capacity to deliver maternal nutrition interventions; this issue is compounded by limited resources at health facilities. A maternal nutrition assessment, counseling, referral, and problem-solving with mothers at the facility level are limited by a lack of job aids (e.g., counseling materials, nutrition assessment, and referral tools), anemia testing kits, and commodities (e.g., IFA supplements and deworming medicines), as well as a lack of training for health facility staff on how to use them. Although donors and partners work to bridge coverage gaps by using community health workers (CHWs) to reach more mothers at the community level, CHWs' roles are not comprehensive enough to deliver focused ANC and PNC services. Increasing demand for ANC and PNC services, and addressing barriers to their use, should be a focus of nutrition programs—but first, facilities mandated to deliver maternal nutrition interventions need support to provide these services, including ongoing monitoring and supervision. PNC services need particular attention, as this is the time when the majority of maternal deaths occur, yet only about half of mothers received PNC services in 2016. We recommend the national and local government, with support from implementing partners, ensure adequate pre-service and regular in-service training, sufficient supervision, mentoring, and refresher trainings on maternal nutrition for health workers, as well as community health workers and other community resource persons and networks. We

also recommend that the government provide the necessary resources, tools, and commodities to public and private facilities.

- **Responsible:** National and local government, with support from implementing partners

Recommended Priority Actions for Local Government

- **Strengthen use of nutrition data at the facility and community levels.** Advocacy and costing efforts rely on availability and use of maternal nutrition data at the facility and community levels. Data utilization is also essential for evidence-informed programming and implementation. We recommend that local government, with the support of implementing partners, strengthen capacity among health facility staff to collect, analyze, and interpret data.
 - **Responsible:** Local government, with support from implementing partners

Recommended Priority Actions for Implementing Partners

- **Increase advocacy for maternal nutrition.** Advocacy is needed to improve additional investment in maternal nutrition services, as well as staff capacity and competencies. Advocacy efforts will help sectors and agencies plan for and finance maternal nutrition-related services or activities and include maternal nutrition actions in their sectoral plans. These advocacy efforts will also help ensure that adequate resources are available for nutrition services. It is our understanding the UNICEF is facilitating the development of an advocacy and communication strategy that will align with UNAP II and MIYCAN. We recommend that the implementing partners support this process and work with the MOH and other key partners to increase advocacy efforts for maternal nutrition.
 - **Responsible:** Implementing partners, in support of national government
- **Strengthen multi-sectoral coordination between the government and implementing partners.** The current policies and guidelines on nutrition in Uganda call for multi-sectoral coordination, because nutrition practices are inherently multi-sectoral in nature. Improved coordination between government agencies, as well as between implementing partners, will reduce duplication of efforts and parallel planning. We recommend that implementing partners help the national government break down sectoral siloes by linking nutrition and maternal health programs by creating or renewing coordination structures (e.g., a technical working group on nutrition). District Nutrition Coordination Committees, which are important checkpoints for integrating multi-sectoral thinking in district-level interventions, are not fully functional across all districts of Uganda, and continue to need ongoing support and supervision. We also recommend that USAID support the Office of the Prime Minister and MOH to provide technical assistance and support for District Nutrition Coordination Committees across districts.
 - **Responsible:** Implementing partners, in support of national and local government

Additional Recommended Maternal Nutrition Actions

Earlier, we identified the top five recommended maternal nutrition priorities for Uganda, based on our understanding of the most essential, foundational needs for improved maternal nutrition nationally. We also identified the following supportive actions for improved maternal nutrition.

- **Update national guidelines on maternal nutrition.** The new national MIYCAN guidelines provide the framework for improved maternal nutrition. Now, the national guidelines specific to maternal nutrition—last released in 2010—should be updated to incorporate the most recent research and evidence on antenatal care, supplementation during pregnancy, and dietary diversification as key actions to prevent maternal malnutrition. Specifically, guidance on ANC

attendance should be updated from four to eight visits; and calcium supplementation during pregnancy should be added as per WHO recommendations.

- **Responsible:** National government
- **Prevent stockouts of maternal nutrition commodities at the facility level.** Although anemia remains a major public health problem in Uganda, anemia-testing kits are frequently unavailable and are not on the national essential drug list. In addition, health facility staff report that Fansidar, anti-helminthic treatment, and IFA supplements are frequently stocked out. Advocacy is needed to improve the availability of maternal nutrition supplies and commodities in facilities, and anemia-testing kits need to be included on the essential drug list in Uganda. We recommend that implementing partners work with the MOH to ensure zero stockouts of key maternal nutrition commodities, such as Fansidar, anti-helminthic treatment, and IFA supplementation.
 - **Responsible:** National government, with support from implementing partners
- **Incorporate social and behavior change as a cross-cutting priority.** Health workers agree that pregnant and lactating women face numerous barriers to proper nutrition, including structural barriers, gender norms, lack of availability or access to nutritious foods, and inability to prepare nutritious foods. To address the structural and socio-cultural barriers that influence mothers' knowledge, attitudes, and practices during pregnancy and lactation, projects need to incorporate social and behavior change as a key cross-cutting priority with a multi-sectoral lens. For example, greater understanding of pregnant women's knowledge, beliefs, attitudes, practices, and influencers regarding ANC and PNC will be key for designing more effective services and programs—along with more effective counseling methods at the health facility and community level. We also recommend that USAID support rollout of the GOU's new National Nutrition Social and Behavior Change Strategy, being developed in 2020, and require projects to align SBC activities with the overarching strategy.
 - a. **Responsible:** Implementing partners, in support of national government

Incorporating Field Test Findings into USAID MCHN's Work Plan

We organized a virtual workshop with key members of the USAID MCHN Activity team to reach consensus on maternal nutrition priorities for Uganda, and to identify priorities to incorporate into the USAID MCHN Activity's work plan. The USAID MCHN Activity reported using information gathered through the field test and the priorities when developing their PY2 work plan. Table 3 summarizes how the maternal nutrition priorities have been adopted in the USAID MCHN Activity's work plan, or will be addressed later in the project.

The priorities here reflect the USAID MCHN Activity's purpose, which is to strengthen government performance in implementing strategies to improve MCHN outcomes. From January 2020 to December 2024, the Activity will work closely with the GOU, as well as the private sector and other implementing partners, to strengthen leadership and governance, rollout national strategies and programs, and ensure coordination and cooperation among stakeholders. The Activity also includes a small service delivery component within Kampala City to advance new models for MCHN services and systems in urban settings.

Table 3. Recommended Maternal Nutrition Priorities and Next Steps

| Recommended Maternal Nutrition Priorities | USAID MCHN Activity's Next Steps |
|--|---|
| 1. Increase advocacy for maternal nutrition. | Will consider advocacy efforts in long term plans, but beyond the scope for PY2. |
| 2. Conduct costing for nutrition activities, including maternal nutrition. | Will consider costing efforts in long term plans, but beyond the scope for PY2. |
| 3. Strengthen use of nutrition data at the facility and community levels. | Added capacity strengthening for use of data at the facility/community levels in the PY2 work plan. Will support the government to incorporate nutrition into the health care quality assurance assessment tool. |
| 4. Strengthen multi-sectoral coordination between government and implementing partners. | Added activity to strengthen coordination in the PY2 work plan will facilitate coordination between technical working groups in the MOH. Future plans could include further cross-sectoral coordination. Also will work in PY2 to support training on the new MIYCAN guidelines, and action planning process for the MIYCAN guidelines. |
| 5. Strengthen capacity of health facilities and community health workers to provide maternal nutrition services. | Added an activity to support the MOH Nutrition division with a position paper to increase the supply of maternal nutrition commodities. Will coordinate with other organizations on provision of equipment to facilities. Also added an activity to support the development of a mentorship tool for health facilities. |

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Annex I: Maternal Nutrition Operational Guidance Checklist

Step-By-Step Guidance on How to Add/Adapt Maternal Nutrition Interventions

Directions: Use this checklist (Kavle, Picolo, and Dillaway 2019) as you work through this maternal nutrition guidance. Use it to determine next steps for program design and implementation. You can use a separate notebook or Microsoft Word file/Excel sheet to track what data/information currently exists, information needed, as well as your objectives, funding, and timeline.

Maternal Nutrition Program Guidance



STEP 1 Determine available information & data on maternal nutrition

Determine:

- What mothers, family members, health providers know about maternal diet (including collating survey data/qualitative reports on knowledge/beliefs)
- If information is available on content & quality of messages/counseling carried out in facility and community-based programming
- If data is available on dietary intake and diversity during pregnancy and lactation
- What data is available on anemia prevalence and causes
- What are the data needs in implementation areas or areas of highest need



STEP 2 Identify priorities, action items & plan for implementation

- Review existing programming, country guidance and government strategies to determine gaps at facility and/or community level (compared to global guidance)
- Align implementation plan & interventions with government strategies, priorities, existing data and program experience to date
- Identify potential collaborators and/or partners (government, NGO, civil society)
- Identify, discuss, assign and agree upon roles and responsibilities with gov't & implementing partners
- Identify objectives and timeframe for implementation
- Determine funds, staff and materials needed for implementation
- Follow-up/accountability and action

Maternal Nutrition Program Guidance



STEP 3

Collect data needed to design/adapt interventions or analyze existing data. Use this data to inform on program design

- Following steps 1 & 2, assess data needs, according to current and missing data
- If no quantitative data exists, collect data on dietary intakes, food frequency; food availability and seasonal variability
- If no data exist at the health facility level, do a health facility assessment to ascertain level & quality of counseling, presence and use of social behavior change materials, job aids, and supplies
- If no qualitative data exists, collect data on norms, actors and/or actions, drivers of food choice, beliefs/knowledge/perceptions regarding maternal diet/weight gain during pregnancy



STEP 4

Develop/adapt interventions for implementation

- Review data from Step 3, to strengthen existing interventions or to develop/add new program interventions
- Based on data needs, incorporate aspects of Enabling Environment, Health Systems and Demand Generation and Use (see examples of counseling messages and content provided)
- Design programs with the consideration of maternal nutrition interventions (antenatal care, postnatal care/during lactation)

Source: Kavle, Picolo, and Dillaway 2019

Annex 2: List of Field Test Interviewees

| Interviewee Category | Interviewees |
|--------------------------|---|
| Program planners | <ul style="list-style-type: none"> • OPM, Head, Nutrition Secretariat • KCCA, Directorate of Public Health • KCCA, Directorate of Gender, Community Services and Production • KCCA Directorate of Education • Head, Nutrition Secretariat, Office of the Prime Minister |
| Program implementers | <ul style="list-style-type: none"> • Chief of Party, USAID RHITES-E • Chief of Party, USAID RHITES-SW • Chief of Party, USAID RHITES-Acholi • Chief of Party, USAID RHITES-Lango • Head of Nutrition, Catholic Relief Services • Program Staff, AVIS International • MNCH Activity consultants |
| Ministry of Health staff | <ul style="list-style-type: none"> • Senior Nutrition Officer, Ministry of Health • Head, Nutrition Division, Ministry of Agriculture, Animal Industry and Fisheries • Nutrition Focal Person, Ministry of Gender |
| Health Facility Staff | <ul style="list-style-type: none"> • Kibuli Muslim Hospital • St. Stephen's Mpererwe • Kisenyi Health Center II • Mengo Hospital • Komamboga Health Centre II • Kawala Health Centre III • Kisugu Health Center II • Luzira Staff Clinic |



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