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# Family Planning and Maternal, Infant, and Young Child Nutrition Formative Study

Mara and Kagera Regions, Tanzania

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# Abbreviations

<b>ANC</b>	Antenatal care
<b>CHW</b>	Community health worker
<b>DHS</b>	Demographic and Health Survey
<b>FGD</b>	Focus group discussion
<b>FP</b>	Family planning
<b>IRB</b>	Institutional review board
<b>LAM</b>	Lactational amenorrhea method
<b>MCSP</b>	Maternal and Child Survival Program
<b>MIYCN</b>	Maternal, Infant, and Young Child Nutrition
<b>PPFP</b>	Postpartum family planning
<b>TBA</b>	Traditional birth attendant
<b>WHO</b>	World Health Organization

# Executive Summary

## Background

The Maternal and Child Survival Program (MCSP), funded by the United States Agency for International Development (USAID), supports the Government of Tanzania's efforts to end preventable child and maternal deaths through the implementation of an integrated maternal, newborn, and child health program in the Lake Zone. According to the Tanzania Demographic and Health Survey (TDHS) 2015–2016, the Lake Zone has comparatively low use of modern contraceptives among married women (23% compared with 32% nationwide). In Tanzania, 59% of infants under 6 months are exclusively breastfed, an increase from 2010 (50%) and from 2004–05 (41%). Thirty-nine percent of children under age 6 months were given some food other than exclusively breast milk. Suboptimal infant and young child feeding practices and attainment of adequate child growth also pose a challenge. Over one-third of children under 5 years of age are stunted in Tanzania nationally; in Kagera region, 41.7% of children are stunted. Use of the lactational amenorrhea method (LAM) remains very low, at 0.6% in the Lake Zone and 0.5% nationally.

This report presents findings from a formative study, conducted in two selected regions of the Lake Zone (Kagera and Mara), that was embedded within MCSP's broader work in Tanzania. The objective of the study was to explore sociocultural and environmental cues to birth spacing and maternal, infant, and young child nutrition (MIYCN) practices and identify barriers and facilitating factors for optimal family planning (FP) and MIYCN practices.

## Methodology

This formative study employed qualitative methods, namely focus group discussions (FGDs) and in-depth interviews. In both Kagera and Mara regions, three districts were selected for the study. In each district, study sites were selected among MCSP-supported government health facilities and adjacent village catchment areas with routine engagement of community health workers (CHWs).

The study respondents were mothers of children under the age of 1 year (24); fathers of children under the age of 1 year (6 FGDs); grandmothers of children under the age of 1 year (12); CHWs (6 FGDs); community leaders (4 FGDs); traditional birth attendants (TBAs) and elderly influential women (12), and health service providers (6). In-depth interviews with mothers of children under the age of 1 year took place over a series of three consecutive visits. In-depth interviews were carried out with grandmothers, TBAs, and health service providers. FGDs and in-depth interviews were all audio recorded, and field assistants simultaneously took notes. Verbal informed consent was obtained from all participants prior to participation. The National Institute for Medical Research Institutional Review Board (IRB) in Tanzania and the Johns Hopkins Bloomberg School of Public Health IRB in the United States approved the study.

The field research took place from 12 January 2015 to 12 February 2016. An analysis and report-writing workshop was held during which field staff and study investigators discussed the data collection experience, explored the data, and identified key themes for the report.

## Key Findings

### Antenatal practices and care seeking

Findings from the study sites indicate that overall, pregnant women seek antenatal care (ANC) at some point during their pregnancy. In our sample of mothers interviewed, only one mother reported not seeking ANC from a health facility and only went to the facility at the time of delivery. Of the 24 mothers in the study, 17 reported that their first ANC visits were at 3–4 months of their pregnancy, two mothers went at 2 months; one at 6 months, and three at 7 months. ANC visits included guidance on maternal diet and infant feeding as well as the benefits of FP and recommended timing for postpartum contraception.

Apart from the ANC services offered by the health services, mothers also had access to ANC services that are offered by the CHWs who made house visits. The utilization of TBAs was limited to treatment of pregnancy-related complications and was not a routine process.

The decision to seek care during pregnancy was informed by mothers' understanding of the benefits of using ANC services during pregnancy and advice received from other family members. Mothers indicated that they discussed matters related to pregnancy with family members (husband, mother, mothers-in-law), and in some cases men escorted their wives to ANC services. In our sample, 13 of the 24 mothers reported having discussed dietary requirements with their husbands. Fathers were reported to be the final decision-makers in matters of family welfare.

### MIYCN and FP practices: First 6 months after delivery

#### *Initiation of breastfeeding first hour after birth*

Respondents indicated variations in the timing of breastfeeding initiation. Less than half of mothers reported initiating breastfeeding within the first hour of birth. Delay in initiation of breastfeeding was attributed to a number of factors, namely: needing time for the mother to take a bath and eat before she can start breastfeeding, being advised to give the child water before breastfeeding, pregnancy-related complications, such as the placenta being retained in the uterus after delivery, the child being asleep, the mother not knowing that she needs to breastfeed the child immediately, and the mother not having enough milk. Mothers were generally not knowledgeable about the importance of early initiation of breastfeeding after birth. Breastfeeding initiation within an hour of delivery was not discussed in the interviews, but rather the timing of breastfeeding initiation was often described as a natural process that unfolds when events allowed them to hold their children, rather than as a process to ensure that breastfeeding is initiated within a specific time frame. Overall, there was limited understanding among mothers that giving the child liquids before initiating breastfeeding can interfere with the child's ability to establish and maintain exclusive breastfeeding.

#### *Exclusive breastfeeding 0–5 months after birth*

While most mothers had heard of exclusive breastfeeding, there was a disconnect between knowledge and practice. Mothers breastfeed their infants; however, exclusive breastfeeding is rarely practiced in adherence with recommendations by the World Health Organization (WHO). Only one mother reported to have exclusively breastfed her child for 6 months. Many mothers reported introducing cow milk, tea, porridge, juice, and soda before the infant was 6 months old. The main reason cited for inability to practice exclusive breastfeeding was not having sufficient breast milk. Insufficient milk was not perceived as a function of insufficient suckling but rather a consequence of the quality and quantity of food consumed by mothers during the postpartum period. It was also noted that mothers resume working as early as 1 month after delivery and report taking their babies to the field (in cases where fields were far from home), especially if they are exclusively breastfeeding at least in the first 3 months. Mothers' income-generating activities were noted as a reason to leave their children at home with other family members, which impeded exclusive breastfeeding.

## ***Contraceptive use in the first 6 Months after Birth***

Overall use of contraceptives was low. Of the 12 mothers interviewed who had children under the age of 6 months, only two reported using contraceptives (implant and injectables [depo]). For many of the mothers, the main reasons for not using contraceptives were not having seen their periods or that the child was still breastfeeding. Despite low levels of FP use, it was reported that women resume sexual relations as early as 1 month after giving birth. Early resumption of sex was mainly attributed to lack of patience among men or fear among women that they will lose their husbands to other women if they delay resuming sex. The findings from the field reveal that women may be at risk of conceiving, especially due to not practicing exclusive breastfeeding. Hence, their fecundity may have returned earlier than expected, and they may have resumed sex without using contraception.

## ***Knowledge and Use of the Lactational Amenorrhea Method (LAM)***

Knowledge of LAM was low among mothers, grandmothers, fathers, and TBAs. While some had heard of using breastfeeding for FP, they were not able to explain the three criteria for LAM to be effective. Mothers recognized a relationship between breastfeeding and birth spacing, but they believed that it was not limited to the first 6 months and did not necessarily require the breastfeeding to be exclusive. Trust in and knowledge of LAM among the CHWs and health service providers was mixed: some understood the method, while others had gaps in their knowledge or concerns about the feasibility and efficacy of the method.

None of the mothers who had children under the age of 6 months reported using LAM. Some mothers reported that they were exclusively breastfeeding, but when they were asked what FP method they are using, they reported not using any method. Communities perceive LAM as a difficult method to adhere to, especially the exclusive breastfeeding component, and there were also concerns about the effectiveness of the method.

## **MIYCN and FP Practices: 6–12 Months After Delivery**

### ***Breastfeeding and complementary feeding practices 6–12 months***

All mothers with children above the age of 6 months reported continuing breastfeeding their children. Most mothers reported the desire to breastfeed their children for 2 years, and some wanted to breastfeed for up to 3 years. The main reason for continued breastfeeding was the perceived value of breast milk to the health of the child, as stated by one of the mothers interviewed. Overall, the frequency of breastfeeding was reduced, and mothers reported changing breastfeeding patterns from breastfeeding “on demand” to a more spaced/planned breastfeeding schedule.

Foods introduced to children during this period were mainly carbohydrates (potatoes, porridge, banana, ugali<sup>1</sup>), with limited introduction of vegetables and fruits, because mothers believe that this food is soft and can be digested easily by the child. By 6 months, all of the children had already been given porridge, which was seen as a food that was “light” and could be easily digested. At the age of 9 months, children were introduced to more solid foods and ate family food.

### ***Uptake of family planning 6–12 months after delivery***

Use of FP by 6 months after delivery is still very low. Only two out of 12 mothers with children above the age of 6 months reported using a modern FP method. The timing of the uptake of a FP method was dependent on mothers’ belief that they are protected from subsequent pregnancies because they are breastfeeding. However, since women exclusively breastfeed for a short time, some for even less than 3 months, they are sometimes unknowingly exposing themselves to the risk of pregnancy, especially since women reported resuming sexual relations very early, in some cases as early as 1 month after giving birth.

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<sup>1</sup> Ugali is a stiff dough prepared with cornmeal (maize meal), cassava flour, and sorghum or millet.

Concerns about side effects were mentioned as a factor preventing women from using modern contraceptives. Another reported obstacle was their husbands' opposition to the use of modern FP methods. Husbands played an important role in decisions about contraceptive use. Discussions with a partner about FP use or intention to use FP were limited: only 15 of the 24 mothers interviewed reported discussing FP with their partners.

### ***Communication and Information Channels***

Two main sources of information for MIYCN and FP were identified by mothers: interpersonal communication and mass media. Interpersonal sources included facility health service providers, CHWs or village health workers, family members, and friends. Mass media sources included radio, posters, and leaflets. Health service providers and CHWs or village health workers were identified as the most frequent and most trusted sources of information.

## **Discussion and Recommendations**

### **Recommendation 1: Strengthen the Policy and Enabling Environment for CHWs**

At the national level, the policy environment needs to be supportive of MIYCN and FP services. Given the limited number of CHWs and that they are volunteers, their ability to reach all families requiring their services is compromised. CHWs described their heavy workload, given the number of households that each had to visit, while at the same time working to support their own families. There is a need to increase the recruitment of CHWs without jeopardizing the quality of services offered. At the same time, CHWs should be integrated into the formal health care system to better serve the communities.

### **Recommendation 2: Address Health System Barriers**

Promoting MIYCN and FP practices will also require intervening at the health system level. Mothers reported limited understanding of optimal MIYCN and FP practices despite their frequent contact with the health facilities. Health facilities need support to adopt best practices that encourage women to use optimal MIYCN practices, and that help women to understand their risk of pregnancy and to decide if they would like to use a FP method. Health service providers should receive additional mentorship and support to improve their counseling and service delivery practices regarding MIYCN and FP. This may require incorporating opportunities for values clarification to address perceptions hindering quality service provision. It is important that health facilities not operate in isolation from the communities they are serving. Stronger links need to be established between the communities and health facilities, with the CHWs acting as a link between the two. The role of CHWs in following up on service provider recommendations and following through on referrals could be further strengthened.

### **Recommendation 3: Promote Community-Based Approaches**

At community level, strengthening community-based counseling services and improving the capacity of CHWs will have a positive impact on providing the much-needed MIYCN and FP information and addressing misconceptions surrounding MIYCN and FP. Improving the capacity of CHWs will enable them to capitalize on the contacts that they have with mothers, fathers, and family members to provide MIYCN and FP information and services from pregnancy through the extended postpartum period. Community-level interventions could also benefit from the establishment of mother-and-father support groups to help mothers and fathers practice optimal MIYCN and FP behaviors within an enabling environment of peer support.

### **Recommendation 4: Promote Community and Family Support for MIYCN and FP**

Another intervention that is likely to improve MIYCN practices (especially optimal feeding practices) is the promotion of social support through the engagement of older mothers/grandmothers, mothers-in-law, and

fathers. Infant feeding is clearly a social practice involving both the breastfeeding mother and the social context of that interaction. Innovative approaches are needed that will engage older women/grandmothers and fathers and coach them to provide positive social support that is key to improving maternal and child health. Income generation and savings-and-loan opportunities could be explored to address financial barriers to a quality diet and alleviate pressure for women to return to work soon after delivery, which hinders exclusive breastfeeding.

### **Recommendation 5: Fill the Information Gap on MIYCN and FP**

There was a dearth of information about optimal MIYCN and FP practices at the community level. Mothers had limited understanding of optimal breastfeeding practices and complementary feeding practices as well as risk of pregnancy and importance of timely postpartum contraceptive uptake after childbirth. Providing health education, dialogue, and learning opportunities are key intervention areas that should be targeted at mothers, key influencers in the community (fathers and grandmothers), CHWs and health service providers, to positively impact on MIYCN and FP practices. Developing a social and behavior change strategy that would address knowledge gaps and misconceptions on MIYCN and FP will be of significant importance in promoting optimal MIYCN practices and FP uptake.

# Chapter I: Background and Rationale for the Study

## Introduction

The Maternal and Child Survival Program (MCSP), funded by the United States Agency for International Development (USAID), supports the government of Tanzania's efforts to end preventable child and maternal deaths through the implementation of a 3-year integrated maternal, newborn, and child health program in the Lake Zone. According to the Tanzania Demographic and Health Survey (TDHS) 2015–2016 (Ministry of Health 2016), the Lake Zone has comparatively low use of modern contraceptives among married women (23% compared with 32% nationwide). In Tanzania, 59% of infants under 6 months are exclusively breastfed, an increase from 50% in 2010 and from 41% in 2004–2005 (NBS and ICF Macro 2011, NBS and ORC Macro 2005). Thirty-nine percent of children under age 6 months were given something other than exclusively breast milk. Suboptimal infant and young child feeding practices and attainment of adequate child growth also pose a challenge. Over one-third of children under 5 years of age are stunted in Tanzania nationally, and in Kagera region, 41.7% of children are stunted. Use of the lactational amenorrhea method (LAM) remains very low, at 0.6% in the Lake Zone and 0.5% nationally (Ministry of Health 2016). MCSP is working with regional- and district-level teams to improve the coverage, quality, and sustainability of a fully integrated package of reproductive, maternal, newborn, and child health interventions along the household-to-hospital continuum of care.

This report presents findings from Phase I, the formative phase, of a study embedded in MCSP's broader work in Tanzania. The aim of the study was to inform the development of an innovative, culturally resonant approach for improving postpartum family planning (PPFP) uptake, maternal, infant, and young child nutrition (MIYCN) practices, and optimal practice of LAM as a contraceptive option in Mara and Kagera regions of Tanzania. The study objectives include the following:

1. Explore sociocultural and environmental cues to birth spacing and MIYCN practices
2. Identify barriers and facilitating factors for optimal MIYCN and family planning (FP) practices

Phase 2 of the study, which will be informed by Phase 1 study findings, will test innovative approaches for influencing nutrition and FP perceptions and practices among women, their family members, village leaders, and health service providers in Mara and Kagera regions of Tanzania.

## Background Context

A re-analysis of Demographic and Health Survey (DHS) data from 52 countries revealed that children conceived less than 24 months after the birth of the next older sibling were 1.3–2.3 times more likely to die within the first year of life in comparison with children conceived 36 to 47 months apart (Rutstein 2008). In addition, the likelihood of a child becoming stunted (i.e., chronically malnourished) markedly increases with decreasing birth intervals. Children conceived after 12–17 months are 25% more likely to be stunted or underweight than those conceived after 36–47 months (Rutstein 2008). Stunting, or chronic malnutrition, is measured by low height-for-age (defined as  $\leq 2$  SD below the World Health Organization (WHO) international growth standards reference median) and is indicative of past nutritional insults and recurrent/frequent infection during the first 2 years of life. Stunting can impact lifetime mortality and has negative consequences for educational development, productivity, and human capital (Hoddinott et al. 2008, Stewart 2013). Suboptimal infant and young child feeding practices contribute to stunting and other forms of malnutrition. Early introduction of first foods and liquids prior to the recommended 6 months of age, and cultural barriers/perceptions regarding insufficiency of breast milk can impede exclusive breastfeeding in the postpartum period and contribute to poor growth outcomes, according to DHS data from several countries, including Tanzania (NBS and ICF Macro 2011), and recent implementation science research (Kavle 2014).

In Tanzania, a high total fertility rate (5.4) in combination with substantial unmet need for FP and low modern contraceptive use (32%) go hand-in-hand with short interpregnancy intervals (less than 24 months), inadequate infant and young child feeding practices, and moderate-to-high levels of stunting. Forty-seven percent of second or later births in Tanzania occur at interpregnancy intervals of less than 24 months (i.e., intervals associated with poor health outcomes). Furthermore, 61% of women who have given birth in the last 2 years have an unmet need for FP (they do not want to become pregnant, yet are not using a modern method of contraception).

In the Lake Zone of Tanzania, the site of the formative research, low contraceptive prevalence and poor infant and young child nutrition indicators are particular challenges. Suboptimal infant and young child feeding practices and attainment of adequate child growth also pose a challenge. In the Lake Zone, over one-third of children under 5 years of age are stunted, and in Kagera region, nearly half of children are stunted.

Many synergies exist between PFP and MIYCN. Integrating PFP and MIYCN counseling and service delivery reinforces information about the importance of exclusive breastfeeding during the initial 6 months, the transition to another modern method of FP before LAM criteria are no longer met, and the continuation of breastfeeding when offering complementary food starting at 6 months. Maternal nutrition needs are also critical to address during pregnancy and lactation, especially among young or high-parity mothers.

To support and improve exclusive breastfeeding practices in the first 6 months postpartum, programs that have promoted LAM as a contraceptive option along with infant and young child feeding messages have revealed demonstrated increases in exclusive breastfeeding rates and continued use of FP at 1 year postpartum (Ahmed et al. 2015, Bongiovanni et al. 2005). LAM is a modern contraceptive method based on breastfeeding's suppression of ovulation. LAM is 98.5% effective in protecting a woman against pregnancy during the first 6 months of her baby's life (Labbok et al. 1997), yet the method is often overlooked and not implemented in programs. Many mothers use breastfeeding for FP without understanding the three criteria of correct use of LAM (exclusive breastfeeding, no return of menses, and child less than 6 months of age), which can leave women at risk of unplanned pregnancy. A recent multicountry DHS review also revealed that approximately 75% of women who indicated that they were using LAM actually did not meet the three LAM criteria (Fabic and Choi 2013).

Globally, effective communication regarding return to fecundity, pregnancy risk after delivery, LAM, and the importance of timely transition to another modern method has proven difficult. Women, their families, and service providers commonly hold different models or understandings, and these variant models lead them to conclude that timing of fecundity return can be predicted based on previous births; that women cannot become pregnant until their menstruation resumes; that all FP methods will harm the breast milk and the child's health; or that women are protected from pregnancy as long as they breastfeed (even beyond 6 months postpartum and even if the breastfeeding is not exclusive). Breastfeeding problems and challenges, many of which are unaddressed and underestimated in the first 6 months after a birth, continue to affect the exclusivity of breastfeeding and compromise using LAM as a FP method. These challenges must be further understood and addressed.

# Chapter 2: Study Design and Methodology

## Study Design

This was a formative study designed to inform the development of a revitalized approach for promoting PFP, optimal infant and young child feeding practices, LAM (among other PFP options), and timely transition from LAM to another modern contraceptive method. The National Institute for Medical Research Institutional Review Board (IRB) in Tanzania and the Johns Hopkins Bloomberg School of Public Health IRB in the United States approved the study. Qualitative methods, including focus group discussions (FGDs) and interviews with key respondent groups, and a series of three consecutive in-depth interviews with mothers of children under the age of 1 year were used to gain an understanding of MIYCN and FP practices. The series of three consecutive visits with mothers of children under age 1 was selected in order to build trust and rapport between the respondent and interviewer. More sensitive topics, such as resumption of sexual activity, were covered during the third visit. The three-visit approach also allowed content to be covered in shorter visits (approximately 45 min–1 hour per session) so as not to overburden the respondent. In-depth interviews were also carried out with grandmothers of the same children, as well as with facility-based service providers who offer reproductive, child health, and nutrition services. Focus group discussions were conducted with fathers of children under age 1 year, traditional birth attendants (TBAs), community leaders, and community health workers (CHWs).

## Study Site

The study was conducted in Mara and Kagera regions of the Lake Zone in Tanzania. In each of the regions, three districts were selected for the formative research. Districts were selected to ensure inclusion of the varied cultural beliefs and practices in the Lake Zone. In each of the six districts, one MCSP-supported government health facility and adjacent village catchment area with routine engagement of CHWs was selected as a study site (see Table 1).

**Table 1. Formative research study sites**

Region	District	Health Facility <sup>a</sup>
Mara	Musoma DC	Murangi
	Tarime	Nyarwana
	Rorya	Kinese
Kagera	Ngara	Bukiriro
	Muleba	Kimeya
	Misenyi	Bunazi

<sup>a</sup> All facilities were government health centers.

The health facilities included in the study were health centers with high client loads. The sites had received training in PFP counseling and basic emergency obstetric and newborn care shortly before the study. No post-trainee follow-up or mentorship had been completed at these sites at the time of the study. We are unable to confirm whether the specific providers interviewed in this study had taken part in the training. The CHWs working in the catchment areas of these health facilities had been trained prior to the study. They experienced delays in starting their work, however, due to late arrival of CHW registers.

## 2.3 Study Participants

Study participants included mothers (15–45 years of age, with a child under the age of 1 year residing in the study community), grandmothers (35–80 years of age, and must be mothers or mothers-in-law of the mothers participating in the study), fathers (15–49 years of age, with a child under the age of 1 year residing in the study community), health service providers (working in MCSP-supported facilities and must be maternal and child health [MCH] or FP providers), CHWs (providing community-based services in the study sites), community leaders (in the respective communities), and traditional birth attendants (40–85 years of age residing in the respective communities) in the selected districts in Mara and Kagera regions (see Table 2).

## 2.4 Sample Size and Justification

The sample size and composition of the study were designed to capture a range of cultural beliefs and perspectives of different influencers of FP and nutritional practices. The intent of the study was not to collect data from a representative sample, but rather to gather qualitative descriptive information; hence a purposive sampling approach was used to select informants using information gathered from the village leaders, CHWs, and health facility staff. Table 2 summarizes the respondent groups, sample size selected, and sampling approach.

**Table 2: Summary of sample size selected and sampling approach**

Category of respondents and inclusion criteria	Number of respondents	Sampling approach
<p><b>Mothers</b> Inclusion criteria=mothers 15-45 residing in Kagera and Mara study areas with a child under the age of 1 year Exclusion criteria=mothers less than 15, mothers residing outside the MCSP-supported communities in the selected districts, mothers whose youngest child is older than 1 year</p>	<p>4 women per district 3 districts per region (x2)= 24 women</p>	<p>Identified using purposive sampling Half of mothers (n=12) had children 0–5 months, the other half (n=12), 6–12 months The sample included a range of wealth status, both those who use services at the health facility and those who do not, married and unmarried At least 1 adolescent mother (15–18) was included in each district (n=11)</p>
<p><b>Grandmothers</b> Inclusion criteria=grandmothers 35–80, residing in Kagera and Mara study areas, must be the mothers or mothers-in-law of mothers participating in the study Exclusion criteria=residing outside the MCSP-supported communities in the selected districts, grandmothers who are not mothers mothers-in-law of the mothers participating in the study</p>	<p>2 grandmothers per district 3 districts per region (x2) = 12 grandmothers</p>	<p>Identified using purposive sampling Each of the grandmothers interviewed was linked to mothers of children under age 1 participating in the study</p>
<p><b>Traditional Birth Attendants (TBAs)</b> Inclusion criteria=TBAs 40–85 residing in Kagera and Mara study areas Exclusion criteria=TBAs who reside outside the MCSP-supported communities in the selected districts</p>	<p>2 TBAs per district 3 districts per region (x2) = 12 TBAs</p>	<p>Purposive sampling</p>

Category of respondents and inclusion criteria	Number of respondents	Sampling approach
<b>Fathers (for FGDs)</b> Inclusion criteria: men 15–49 residing in Kagera and Mara study areas and have a child under the age of 1 year Exclusion criteria=men less than 15, , men who reside outside the MCSP-supported communities, men whose youngest child is above the age of 1 year	1 FGD per district = 6 FGDs	Purposively selected Mix of fathers with children 0–5 months and 6–12 months Not linked to mothers selected in the study
<b>Community leaders (for FGDs)</b> Inclusion criteria=leaders 25–85 residing in Kagera and Mara study sites, must have prominent stature in the community Exclusion criteria=leaders who reside outside the MCSP-supported communities)	2 per region = 4 FGDs	Purposive sampling
<b>Facility-based reproductive and child health service providers</b> Inclusion criteria = working in MCSP-supported facilities, must be MCH or FP providers Exclusion criteria=health service providers who do not work in MCSP-supported facilities or who provide services other than MCH and FP	1 per district; 3 per region = 6 providers	Purposive sampling
<b>Inclusion criteria=CHWs providing community-based services in Kagera and Mara study areas</b> Exclusion criteria=CHWs who do not work in MCSP-supported communities in the respective districts	2 per region = 4 FGDs	Purposive sampling

## 2.4 Data Collection Methods and Approach

The study employed qualitative data collection methods, including in-depth interviews and FGDs. The in-depth interviews and FGDs used a participatory approach, including problem ranking, pictorial images, and narrative story scenarios. In-depth interviews and FGDs were used to explore the following topics:

- Knowledge and perceptions related to FP and MIYCN (including return to fecundity and pregnancy risk after delivery)
- Factors influencing adherence to provider’s counseling on MIYCN and FP
- Postpartum contraceptive use and MIYCN practices
- Motivators and barriers to birth spacing or limiting
- Care-seeking patterns for FP, maternal, newborn, and child health services and immunization
- Service provider counseling practices (including beliefs/biases) and service delivery processes
- Existing communication platforms, and reach and use of mobile communication services

FGDs and in-depth interviews were conducted in Swahili. All were audio recorded and at the same time field assistants took notes. Verbal informed consent was obtained from all participants prior to the interviews and FGDs.

## **2.5 Data Transcription and Analysis**

All interviews and FGDs were tape recorded and later transcribed. The transcription process was followed by the translation of interviews and FGDs from Swahili into English. Translated interviews and FGDs were jointly read by MCSP and local research teams, a 1-week preliminary analysis workshop was held to identify dominant themes, and a coding structure for the analysis was developed. Further analysis was carried out based on the dominant themes identified. Key analysis themes identified were framed around: current practices, cues/triggers, barriers and motivators for optimal MIYCN and FP practices, as well as cultural and behavioral influencers. No participant-identifying information was included in the analysis.

# Chapter 3: Antenatal Practices and Care Seeking

This chapter focuses on MIYCN and FP during the antenatal period, antenatal care-seeking practices, and factors influencing decision-making.

## 3.1 Antenatal Practices and Care Seeking

According to WHO standards at the time of the study, pregnant women should at least have four assessments by a skilled attendant, starting as early as possible in the first trimester. Findings from the study respondents indicate that most pregnant women sought ANC at some point during their pregnancy. In our sample of mothers interviewed, there was only one mother who reported not seeking any ANC from a health facility and only went at the time of delivery. Her rationale for not seeking ANC was that she was not aware that she was pregnant. Seventeen out of the 24 mothers in the study reported their first ANC visits were at 3–4 months of their pregnancy, two went at 2 months; one at 6 months; three at 7 months, and the one mother who went at the time of delivery.

*“Did you attend at the health care facility when you were pregnant?...Yes, I went there four times. The first visit I was three months’ pregnant.”* (Mother, 18 years; child, 7 months; Rorya)

*“How old was your pregnancy when you first went to the health center? ...I was six months’ pregnant.”* (Mother, 30 years; child, 10 months; Tarime)

Mothers cited two main reasons for attending ANC services. First and foremost, mothers mentioned going for ANC in order to establish whether they were pregnant and to monitor the progress of the pregnancy.

*“What did you do the first time you went?... I went for a pregnancy test.”* (Mother, 18 years; child, 8 months; Musoma)

The other reason cited by the mothers was experiencing complications, or being sick and needing treatment. For example:

*“At the eighth month I went to district hospital when I had miscarriage threat. I was examined and admitted and given some drugs.”*(Mother, 17 years; child, 8 months; Misenyi)

Mothers expressed considerable faith in the ability of the health service providers to provide them with appropriate ANC, including advising on the kind of food they should eat and how they should feed their infants after delivery.

*“When you were pregnant, where did you go for advice about what to eat during your pregnancy? ...I went to the hospital and doctors advised me to use quality nutritious foods like oranges, pawpaw, pumpkins, coconut, banana, and mangoes.”* (Mother, 15 years; child, 9 months; Musoma).

Facility providers indicated that they counsel women on FP during ANC visits as well as during the delivery process. The main FP topics covered during this period include the benefits and importance of using FP and recommended timing of postpartum contraceptive use. Providers generally recommended 6 weeks or 42 days as the time to use a FP method after childbirth.

*“The family planning advice is offered normally before giving birth that spouses should start family planning in the first 6 weeks given the fact that it is this period when the womb returns to its normal condition after giving birth.”* (Health service provider, Kagera Region)

*“Firstly, most people of these areas are not aware of the importance of family planning, so it is necessary to educate a person about the ways of family planning, the advantages of using family planning to all parents and a baby. When a mother uses family planning, she will get sufficient time to take care her baby, and enough time to rest. A father will also get sufficient time to take care of his baby and time to produce, and for a baby, family planning gives it the advantage of proper mental growing.” (Health service provider, Mara Region)*

*“We tell them the meaning of family planning, the benefits of family planning, the different methods of family planning, and that after 42 days they are supposed to come back for family planning services.” (Health service provider, Kagera Region)*

There were no substantial differences in ANC attendance among mothers from the different study sites or across the different age categories.

In addition to the ANC services at the health facility, mothers also had access to antenatal counseling offered by CHWs through home visits. Two of the mothers interviewed reported having been visited by CHWs who provided them with advice on various maternal and child health topics, including nutrition, delivery planning, and FP.

*“I was visited by the CHW, who told me to find balanced diet meals, and as a pregnant woman I was supposed to eat and drink well... [The CHW] told me to take three meals composed of different kinds of foods.... Did you discuss family planning? ... Yes, when she visits and finds you are pregnant and your first born is around 2 years old, they will tell you things so that you will not be pregnant.” (Mother, 32 years; child, 1 week; Ngara)*

In some cases, mothers mentioned that they had used the services of TBAs or other traditional healers during pregnancy. Interviews with mothers and TBAs gave no indication of use of TBA services during pregnancy as part of a routine system. The use of the TBAs and traditional healers was mainly limited to the treatment of complications or sickness during pregnancy.

*“What challenges did you face during your pregnancy?... Painful back... vomiting... For vomiting I was given traditional medicine .... For back pain I was given medicine from the hospital and another traditional medicine.” (Mother, 25 years; child, 1 month; Musoma)*

It is reported in the interviews and FGDs and from the personal experiences shared by the mothers that many of the women have facility-based deliveries. In the sample of mothers we interviewed, none of them reported having had a home delivery or a delivery at the TBA's home. On the other hand, interviews with TBAs show that they are still assisting women with deliveries when they are called upon. However, in interviews with two TBAs, they emphasized that they examine the women, and if they suspect complications, they refer them to a health facility.

*“My responsibilities are to examine pregnant women and advise those who show signs of complications to deliver at the health center. When women come to me, I make an assessment if this is a complicated pregnancy or not. If I see that this is complicated, then I advise them to go to the health facility. But in cases where I can handle the situation, then I assist them in the delivery process.” (TBA, Misenyi)*

*“If the child is in a good position, then I attend to her, but if I see that the labor process is complicating and the child is moving up and down, you know that this labor is not good, so you advise her to go to the hospital. I go with her to the health facility and hand her over to the nurse.” (TBA, Rorya)*

Another important role played by the TBAs, after they have finished in assisting the delivery, is to escort women to the health facility for further management.

*“When she gives birth in the evening, I take her to clinic next morning”; “My responsibilities are mainly helping [women] at the time they give birth: preparing the first meal after birth and escorting them to hospital.” (TBA, Ngara)*

TBAs also advise the mother of the newborn to make sure she goes to the health facility for further management.

*“I advise her to go home and rest, but remember to take the child to the clinic tomorrow.” (TBA, Rorya)*

## 3.2 Decision-Making Influences on Antenatal Care

The decision to seek care during pregnancy from the study findings is mostly based on the mother’s understanding of the benefits of using ANC services during pregnancy. Mothers were asked what advice they would give a mother who is pregnant, and all the respondents talked of advising her to seek ANC services from a health facility.

*“She is to see the nurse at the age of 4 months pregnancy and that’s when she will know her health and the baby as a whole...She will know the well-being of the baby and herself.” (Mother, 23 years; child, 8½ months; Ngara)*

*“At 3 months, she is supposed to start attending clinic to be close to health care and to be examined more frequently because she is pregnant. She shouldn’t neglect that so as to be given advice, like if she has to go to a higher-level hospital to deliver, you are advised on that earlier.” (Mother, 31 years; child, 9 months; Rorya)*

When asked about their own experiences and whether they shared the information they received with their families, including their partners, it was observed that more than half (15) of the mothers discussed matters related to pregnancy with family members (husband, mother, mothers-in-law), and in some cases, men would escort their wives to the ANC service facilities, as quoted by one of the mothers in her interview.

*“Whom did you go with for ANC services?...I went together with my husband.” (Mother, 32 years; child, 1 week; Ngara)*

In our sample, 13 of the 24 mothers reported having discussed with their husbands which beneficial foods to eat during pregnancy. Mothers also reported discussing with their husbands use of the health facility for delivery and development of a delivery plan.

*“Were you discussing with your husband about food to eat during your pregnancy? Yes, we were discussing. When I needed foods such as banana, Irish potatoes, green vegetables, beans, fish soup, I told him and he fulfilled; he was not stubborn. He used to advise me to get foods that will boost my energy and hemoglobin. Being my partner, he was very close to advise me.” (Mother, 31 years; child, 9 months; Rorya)*

*“Where did you go for advice on food to eat during your pregnancy?...[I was] advised by the nurse, my mother, and my husband.” (Mother, 18 years; child, 8 months; Musoma)*

*“...Yes, we arranged what I should eat. I loved greens a lot and sometimes I just felt like eating anything, and he would want me to eat what was good for me and the baby. He never wanted us to deprive the baby's rights on eating.” (Mother, 23 years; child 8½ months; Ngara)*

Women’s mothers and mothers-in-law were also noted to play a role in providing advice on taking care of the pregnancy

*“Let’s look at the issue of decision-making in the family: Who was deciding what you ate during your pregnancy?...It was my mother who used to advise me to take fruits.” (Mother, 15 years; child, 9 months; Musoma)*

Men play a patriarchal role within the household and view themselves as being in charge of household finances and decisions. In the FGDs, men reported that they were the final decision-makers at the household level. This was mentioned in one of the FGDs:

*“Because he makes decisions, a woman cannot do anything. If you have the ability to afford everything, then she has nothing to do. When she wants to eat meat, you can buy it for her. What has she to do with it? Thus, it is the father who makes decisions.”*  
(FGD, fathers, Misenyi)

Women also reported that the fathers were the ones with the final decisions in matters related to the welfare of the family, as discussed by one of the mothers:

*“Whose advice did you follow from all the people you have just mentioned? ...The child’s father...Why? ...He is the one who decides and has the final say when we sit and talk.”*(Mother, 18 years; child, 3 months; Ngara)

# Chapter 4: MIYCN and FP Practices: First 6 Months after Delivery

Maternal, infant, and young child nutrition and FP are often seen as distinct, yet they are intertwined. Exclusive breastfeeding in the first 6 months after birth protects the child from becoming malnourished and at the same time meets the mother's contraceptive needs if she is practicing LAM. Chapters 4 and 5 are presented in a manner that allows for exploration of links between nutritional practices and FP practices in the first year after birth. Chapter 4 focuses on the first 6 months after birth, and chapter 5 focuses on the period from 6 months to 1 year after birth.

## 4.1 General Perceptions of Breast Milk and Breastfeeding

Overall, breastfeeding is perceived to be important for a growing infant, as the only food for the infant, as being nutritious and important for the child's growth, as a process that creates a bond between the mother and the child. Breast milk is also seen as offering the child immunity against diseases.

*“...A child should get breastfed only for the first 6 months without being given any other milk because breast milk is very nutritious from the food the mother eats.....Breastfeeding creates a bond between the mother and the child...Breast milk is important for the child's growth because the child is used to the milk even before being born....” (FGD, fathers, Ngara)*

*“The child is supposed to be breastfed throughout, breast milk is nutritious, and I also tell them that exclusive breastfeeding during the first 6 months is something very important.” (Interview, health service provider, Ngara)*

## 4.2 Initiation of Breastfeeding during the 1st Hour after Birth

The WHO global recommendation is that all infants should start breastfeeding within 1 hour of birth: early initiation of breastfeeding (WHO 2002). Study responses revealed varied experiences with regard to timing of breastfeeding initiation. Mothers and health service providers spoke of the newborn being put on the breast “immediately” after birth. However, “immediate” does not necessarily mean within the first hour of birth. Mothers were asked when they first breastfed their child (self-reported timing of breastfeeding initiation), and nine out of the 24 mothers interviewed reported breastfeeding within the first hour after birth, whereas 10 mothers reported delaying initiation of breastfeeding from 2 hours to 3 days. The remaining five women were not able to recall the timing of their initiation.

Delay in initiation of breastfeeding was attributed to a number of reasons, namely, needing time for the mother to take a bath and eat before she can start breastfeeding, being advised by mothers and grandmothers to give the child water before breastfeeding, pregnancy-related complications, such as the placenta being retained in the uterus after delivery, the child being asleep, the mother not knowing that she needs to breastfeed the child immediately, and the mother not having enough milk.

*“After delivery you need to start with taking a bath and take porridge; that is when the child can breastfeed”(Mother, 17 years; child, 12 months; Muleba)*

*“...first thing given was water, the child was given breast milk after 2 hours. I was bleeding heavily and was not able to breastfeed immediately.” (Mother, 17 years; child, 3 weeks; Muleba)*

*“...I breastfed 3 hours after giving birth...nobody told me to breastfeed her.” (Mother, 18 years; child, 9 months; Tarime)*

*“...first day I gave the child water...the second day tea because I did not have breast milk, though she was breastfeeding, but there was no milk until I returned home.” (Mother, 32 years; child, 10 months; Tarime)*

Some mothers waited for their milk to come down, while others breastfed their children despite not having milk, as indicated in the quote. Delay in initiation of breastfeeding was also attributed to the child needing to first learn how to suck the breast. None of the mothers mentioned getting help with latching the baby to the breast, so in the meantime, until the child “learns to suck,” the mothers give water to avoid starving the child.

*“I mixed salt and sugar with boiled water so that the child was not hungry. Traditionally, they say that a child should not be hungry before it knows how to suck. I gave birth in the morning and started breastfeeding in the evening.” (Mother, 22 years; child, 2 months; Tarime)*

Interviews carried out with TBAs indicate that they also play a role in delaying the initiation of breastfeeding. TBAs spoke of assisting the mothers in bathing and preparing porridge for the mothers so that they were able to produce milk before they gave the child to the mother for breastfeeding. The process would take more than an hour before the mother was “ready” to breastfeed her baby.

Delay in initiation of breastfeeding was further compounded by expression of and discarding colostrum, as reported by one of the mothers (this was the only case reported):

*“...the child was given milk and water. I was advised to give water because the child was crying...was told to express the foremilk and discard it, washed the breast, and then started breastfeeding the child.” (Mother, 18 years; child, 7 months; Rorya)*

Colostrum was perceived as “not clean for child” because of its yellow color, and therefore, the milk should be expressed and discarded until “white” milk starts coming out.

Mothers did not know that it is important for the child to start breastfeeding immediately after birth. Rather, the timing of breastfeeding initiation was more often described in terms of a natural process that unfolds once women are able to hold their children, without an explicit focus on feeding within a specific time window. Although several of the mothers discussed breastfeeding immediately after the baby was born, none of them explained the early initiation as something of importance for the welfare of the child. Some of the mothers reported being instructed by the health service providers to breastfeed immediately after birth. However, mothers often did not follow this advice for a number of reasons, such as not having adequate breast milk or being advised by family members to give the child water before breastfeeding.

In spite of these challenges, some positive practices were noted. One of the mothers reported that she allowed her child to continue suckling the breast even when she believed that she had no milk. She continued until her milk started coming down without being tempted to give the child water or other foods. However, the ability to produce milk was linked to having eaten porridge and not something that happens naturally after giving birth:

*“I took porridge. Two hours after delivery I had breast milk. What did you feed your child during that time? She was just sucking until the breast milk started to come out.” (Mother, 22 years; child, 9 months; Ngara)*

Overall, there was limited understanding among mothers that giving the child liquids before initiating breastfeeding can interfere with the child's ability to establish and maintain exclusive breastfeeding. Mothers indicated they would give their newborns water in order to “satisfy thirst.”

*“...I breastfed after one day. My grandmother advised that the child should be given water because he was thirsty.” (Mother, 31 years; child, 12 months; Muleba)*

In some other cases, water was sweetened or adapted to the water-sugar-salt solution to give the child strength to be able to suck. Water was given to newborns when they cried, as crying was often interpreted as a sign of hunger.

This was discussed in the context that immediately after giving birth, mothers do not have enough breast milk. Even if the child is put on the breast, nothing will come out and the child would end up crying, so water would be given to settle the child.

### 4.3 Exclusive Breastfeeding 0–6 Months after Birth

Exclusive breastfeeding entails the mother giving only breast milk to her child for the first 6 months of life without giving the child any other foods or liquids, including water. While most mothers had heard of exclusive breastfeeding — “*you have to exclusively breastfeed her/him so that when s/he turns 6 months, you initiate foods and drinks*” — there was a disconnect between knowledge and practice. Mothers breastfed their infants for at least some period of time, but exclusive breastfeeding was rarely practiced. Only one mother reported to have exclusively breastfed her child for 6 months:

*“...Yes, I exclusively breastfed her for 6 months. When she turned 6 months I initiated porridge.” (Mother, 31 years; child, 9 months; Rorya)*

A good number of mothers reported that they introduced cow milk, tea, porridge, juice, and soda before the infant was 6 months.

*“I breastfeed her, and when she was three months I started giving her water...She would cry, then I would breastfeed her. She would refuse, but when I gave her water, she would calm down...I also gave her soda and fruits like pineapples and berries when she turned 4 months.” (Mother, 22 years; child, 9 months; Ngara)*

*“...At the age of 3 months I gave her porridge and milk, and at the age of 6 months, stiff porridge and sardines.” (Mother, 17 years; child, 12 months; Muleba)*

Some fathers were able to explain the concept of exclusive breastfeeding, such as:

*“It is advised to breastfeed the baby for six months, after that, the baby can be given food and porridge.” (FGD, fathers, Misenyi)*

*“When the child is born they have to be feed the mother’s milk and also for the next six months the baby should only feed on the mother’s milk no addition of other food.” (FGD, fathers, Ngara)*

Overall, fathers held positive perceptions towards exclusive breastfeeding as an ideal practice. Exclusive breastfeeding was seen to provide nutrition needed to support the child’s growth and physical and mental development. However, fathers raised concerns that exclusive breastfeeding is not realistic in their settings, due to breastmilk insufficiency and a decrease in maternal food intake following birth.

*“Breastfeeding is a good thing, but in our community sometimes production of food may be low within two or three weeks after she has given birth and that will lead to low lactation and in the end a baby will have to drink cow milk.” (FGD, fathers, Muleba)*

*“It is not possible in this area to rely on breast milk only for all those months [6 months as they are advised by the health service providers]; the amount of mother’s food decreases about 2 weeks after delivery, [which is the time] when the child can be introduced to cow milk. Sometimes it’s good when the mother gets porridge.” (FGD, fathers, Musoma)*

*“I would advise my partner to strive to look for food that will be able to increase milk for the baby. What I mean is the food that is heavy and the milk will come out heavy, the baby will be full but if the baby gets milk that’s not heavy it won’t be full nor stay in the stomach.” (FGD, fathers, Ngara)*

The main reason cited for the decrease in mother's food within 2 weeks after giving birth is the inability of families to afford to provide for the breastfeeding mother. Although men were supportive of their wives' eating more for the sake of breastfeeding their children, financial constraints did not allow for that to happen.

More than half of the mothers reported having started working within a month of giving birth, and it was discussed that this might affect the mother's breastfeeding ability. Mothers reported taking their babies to the field with them (in cases where fields were far from home), especially if they are exclusively breastfeeding at least in the first 3 months. In Kagera region, it was noted that mothers work much closer to home compared with mothers in Mara region, who work much farther from home.

*“You told me that you go to the farm at around 8:00 am to 9:00 am. When you are there, who takes care of your child? I usually go with him because he needs to breastfeed.” (Mother, 31 years; child, 1 month and 2 weeks; Misenyi)*

*“... the baby does not eat, she only breastfeeds.... When you are on the farm, who takes care of the baby?... I go with her, and I would normally do the farm work while carrying her on my back.” (Mother, 18 years; child, 3 months; Ngara)*

Typically, a mother would go to the fields between 6:00 a.m. and 7:00 a.m. and return home between 11:00 a.m. and 12:00 noon. While working in the field, mothers breastfeed their babies from time to time and continue with their field work. Other mothers who reported working around home would continue with their domestic chores between nursing their babies. The younger mothers who were still residing with their parents reported spending much more time at home than working on the farm.

*“Who takes care of the baby when you are on the farm? My elder daughter carries him. How about feeding him? ... He has not started eating so she calls me to come and breastfeed. Because I do not work from home, it is easy. When the child cries, they will call me to come back and breastfeed him.” (Mother, 17 years; child, 5 months; Misenyi)*

It was reported that mothers working outside the household are forced to introduce foods early because they are unable to take their children with them and hence have to leave them under the care of other household members.

*“They are those who give them porridge, milk, and even tea, especially those who go to work and have to leave their children at home. So when the children are hungry, they are fed on porridge or tea.” (Mother, 18 years; child, 3 months; Rorya)*

*“When you are out for farming activities, who takes care of your child? ...most of the time I go with her. Sometimes I leave her with her father and the elder child. They take care of her until I come back... When you are not around, who feeds her? ...her father feeds her porridge.” (Mother, 22 years; child, 2 months; Tarime)*

*“...when on the farm, who holds your baby and takes care of him? ... my mother-in-law does not go to the farm. She stays home to care for all the children around and cooks porridge and tea for them.” (Mother, 18 years; child, 4 months; Tarime)*

It was also mentioned that when a mother works a long time in the sun without nursing, the breast milk heats up and becomes “too liquid.”

*“...when a mother comes back from performing heavy work or having walked in the sun, you should not breastfeed the child because such situations disturb breast milk form, and it becomes lighter.” (Mother, 22 years; child, 2 months; Tarime)*

Fathers also mentioned participation in income-generating activities as a barrier to exclusive breastfeeding:

*“Also, our wives have to partake in other income-generating activities, such as farming, so therefore, the baby will have to be fed other foods while she is away.” (FGD, fathers, Musoma)*

*“The main challenge that most lactating mothers of this community face is that of spending little time breastfeeding their babies because they use most of their time in some small business activities so that they can meet their daily needs. Usually the baby is left with older children who do not know how to care for the baby, so they wait until the time when the mother is back home.” (FGD, fathers, Rorya)*

Suggestions on how families could improve on exclusive breastfeeding were discussed in the FGDs with community leaders. The main issues raised were: There should be continued efforts to educate communities on the benefits of exclusive breastfeeding, and support should be provided for families to increase their incomes in order for breastfeeding mothers to get adequate food. The use of CHWs was also mentioned as a way of following up on women during the breastfeeding period. Sensitizing men about their responsibility in supporting mothers to breastfeed was also mentioned.

Expressing breast milk never came up in any of the discussions with mothers as a means of addressing the challenge of not being able to breastfeed their children when working outside the house environment. The observation coming out of the field work is that mothers are struggling and finding it difficult to combine exclusive breastfeeding with working outside the house.

#### **4.4 Perceptions of Insufficient Breast Milk**

The perception of not having sufficient breast milk was common among many mothers. Insufficient breast milk was cited as a problem by mothers, grandmothers, TBAs, health service providers, and fathers as the primary reason why mothers are not able to adhere to exclusive breastfeeding for the full 6-month duration. There is a strong perception across the different respondent groups that insufficient milk is due to poor maternal nutrition:

*“...breast milk will not be enough and the child would be crying while breast feeding...The mother does not have enough milk....She is eating dry food, not getting porridge to eat ....Soup to drink....What should she do to increase breast milk?...She should drink porridge...she should put a lot of sauce in her foods and not roasted or dry foods; she should also have soup to drink.” (Mother, 17 years; child, 5 months; Misenyi)*

*“...those with insufficient breast milk do give cow’s milk to babies, but if you have enough milk, there is no need to do that.” (TBA, Muleba)*

*“Others have insufficient breast milk production, so I have to advise a mother to eat foods that will increase breast milk production, mostly fluid foods to get enough breast milk for the baby.” (Health service provider, Musoma)*

Insufficient milk was not perceived as a function of insufficient suckling, but rather a consequence of the quality and quantity of food consumed by mothers during the postpartum period:

*“Most of them experience poor nutrition. A mother starts a day with no food, not even porridge nor any leftover depending on what she had the previous night. That way, breast milk will not be sufficient.” (Mother, 32 years; child, 1 week; Ngara)*

*“She should eat most of the time to increase breast milk production, especially foods that will keep the body warm, such as stiff porridge, banana, fish, and beans, and [she] should take the foods while they are still hot.”<sup>2</sup> (Mother, 18 years; child, 3 months; Rorya)*

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<sup>2</sup> “Still hot” referred to food coming from the stove that has not been let to cool down. Taking hot porridge or soup was believed to be useful in stimulating breast milk production.

In discussing their meal plans, mothers seemed to favor foods that increased the quality and quantity of breast milk. Typical foods indicated for this purpose were porridge, ugali, tea, and rice. Vegetables and fruits were rarely mentioned nor considered to be beneficial for increasing breast milk. Carbohydrates constituted the greatest portion of the diet, whereas fish and meat were consumed in moderation.

*“I take these foods, milk, porridge, fish soup, beans, because they help me to increase production of breast milk.” (Mother, 18 years; child, 3 months; Rorya)*

Women also felt that it was important that they ensure they are having enough meals to avoid feeling weak.

*“She [the community health worker] tells me to make sure I get a balanced diet, and my mother tells me the same, “Make sure you eat; even when you feel weak, make sure you eat.” [Mother, 32 years; child, 1 week; Ngara]*

Mothers reported that signs of insufficient milk include: the baby seeming unsatisfied after nursing (crying) due to hunger, the breast feeling empty, or the inability to squeeze out much milk from the breast. For some mothers, insufficient milk was associated with maternal illness.

There were also discussions about “light milk” and “heavy milk.” “Light milk” was perceived to be watery and not good for the child's growth, whereas “heavy milk” was perceived to be more nutritious for the child. Light milk was also linked to the quality of food:

*“What do you mean by light milk? ...light milk is watery and does not work well for the baby... you will notice the milk when the child burps after breastfeeding. If the milk is watery, then you will give the mother medicine to make it heavy....(TBA, Ngara)*

*“How can you distinguish between heavy and light milk? ...if you have heavy milk the child grows strong, but if your milk is light, the baby suffers as well.... ..weight gain becomes poor and the baby's skin will not be soft.” (TBA, Rorya)*

*“The type of food that she eats can spoil the quality of breast milk. A mother can end up with very light milk because the food is of poor quality.” (Grandmother, Misenyi)*

Mothers are very much aware that infants between 2 and 3 months go through a growth period, in which nutritional needs increase:

*“...tell me how you breastfeed her 2 to 3 months after delivery....She (the child) increased her breastfeeding rate as she continued to grow.” (Mother, 17 years; child, 8 months; Misenyi)*

*“My mother told me to exclusively breastfeed so that the child could grow and be healthy. When he turned 3 months, I had insufficient breast milk, and she told me to initiate porridge ....What you say you had insufficient breast milk, what do you mean? The amount of my breast milk got reduced.” (Mother, 15 years; child, 9 months; Musoma)*

However, most mothers interpret increased child appetite as a cue that breast milk production no longer meets the needs of their children and is lacking in both quantity and quality.

*“What do you think this mother might be eating to make her unable to produce sufficient breast milk? ....Sometimes she might have taken stiff porridge, banana, or tea, but a little amount....What could this mother do to change the situation?...she should eat a lot of foods, such as taking tea, stiff porridge, rice, banana, and potatoes to have enough breast milk for the child.” (Mother, 15 years; child, 9 months; Musoma)*

*“I am supposed to breastfeed him up to when he turns 6 months... at 3 months when he was not being filled and he would cry so very much while breastfeeding, that is when my mother advised me to initiate porridge.” (Mother, 18 years; child, 3 months; Rorya)*

Following up on what mothers eat while they are breastfeeding, women reported that they were eating a limited number of foods, which were starch-based, including stiff porridge (ugali), rice, and cassava. The consumption of fruits, vegetables, and protein, like meat, eggs, and milk, was low.

With the common belief that breast milk is insufficient to meet the nutritional needs of the infant in the first 6 months, mothers spoke about addressing this barrier to infant feeding. Mothers said that potential solutions are being able to get adequate food (eating frequently) for the mother or early introduction of food for the child.

*“Sometimes mothers experience a shortage of breast milk, and they decide to initiate some other foods even before 6 months.... In the first month when she was breastfeeding, after urinating, there was no more food in her stomach and she used to cry.... In the second month, when I initiated porridge, even when she cries, it’s not so much.... My mother, she advises me to take porridge to have breast milk.... The nurse also tells me to eat and be really filled, especially porridge and soup.” (Mother, 28 years; child, 2 months; Musoma)*

In addition to better nutrition, in some cases, traditional herbs are believed to increase the quantity of breast milk. Generally, however, mothers perceived that nothing can be done to improve the quality of breast milk, since this was “genetic” and no food or traditional remedies can rectify the situation.

The critical relationship between frequency and duration of breastfeeding and sufficient milk supply was neither recognized nor mentioned by key respondents, including mothers, grandmothers, TBAs, and health service workers. Rather, mothers stated concerns that the more the baby breastfeeds, the more the milk is diminished, or one can say the more the baby nurses, the less milk there is.

*“...I had a lot of breast milk when she was born. She could breastfeed on one breast and be filled, but now she breastfeeds and it is all gone. I don’t have enough milk.” (Mother, 18 years; child, 9 months; Tarime)*

## 4.5 Other Key Breastfeeding Challenges

Mothers also mentioned an inability to breastfeed because of mastitis or breast abscesses or even breast pain. It was explained that one can still nurse an infant in this situation, but the milk might give the child diarrhea. Breast milk was also perceived as unfit for the child due to mastitis or breast abscesses:

*“When she has breast pain, she should not breastfeed the child. Sometimes you may find that the child sucks blood that turns into another disease... Yes, the breast milk is blood.” (Mother, 22 years; child, 2 months; Tarime)*

Mothers being overworked was also mentioned as a contributing factor towards their inability to consistently breastfeed their children or feeding their children other foods before age 6 months. Poverty was a primary reason cited for mothers’ early return to work, in some cases as early as 2–3 weeks after giving birth. It was cited as a challenge in almost all FGDs with fathers and community leaders.

Brief feeding sessions may not allow infants to receive maximum benefit from the hind milk, which is higher in protein and fat content than the fore milk. In addition, short sessions do not permit emptying of the breast, which helps a mother keep up her milk supply. However, this understanding is missing in the mother’s narratives of their breastfeeding experiences. Longer breastfeeding duration was viewed negatively, and when it was mentioned, it was seen rather as a challenge than something positive. When asked what advice she would give to another mother about breastfeeding, one mother noted, *“I will advise her she should not be breastfeeding her child for long because the breast milk may be too much for the child to be able to breathe.” (Mother, 22 years; child, 2 months; Tarime)*

## 4.6 Early Introduction of Other Foods and Liquids

Overall, it is evident from the interviews with mothers that the duration of exclusive breastfeeding is short. Despite the WHO recommendation that mothers should introduce complementary foods alongside breast milk at 6 months of age, in all study sites mothers gave infants water and introduced foods early prior to 6 months of age. By the age of 4 months, children were given other foods early in addition to breast milk. Findings from the interviews with mothers clearly show that the decision to begin introducing other foods and liquids is usually based on the infant's behavioral indicators rather than the age of the infant. The most common behavioral prompt for introducing other foods early is an infant who is seemingly unsatisfied after being breastfed or who wants to nurse more often than usual. A crying child was perceived to be hungry, and this further increased the pressure to introduce other foods to the baby: ...the child might be crying all the time and wanting to breastfeed.” Mothers felt encouraged to follow this practice when children stopped crying after being given porridge or other foods/drinks other than breast milk. Some of the mothers also cited the developmental ability of the child as a cue to introduce liquids other than breast milk.

*“I was giving him porridge, tea, stiff porridge, banana, potatoes, and rice...Why? ...I felt he was growing, and I didn't have enough breast milk.” (Mother, 15 years; child, 9 months; Musoma)*

Infants are introduced to cow's milk, water, porridge, or tea at a very early age, as early as within the first month of life. One mother reported that she breastfed her 2-month-old baby an average of three times a day while also giving her porridge three times a day

*“...she breastfeeds around three times a day, when she wakes-up at around 9:00 or 10:00 a.m. She gets porridge around 2:00 p.m., and the last time is at around 6:00 p.m. I breastfeed her well now considering that I feed her on porridge, too. It's a sufficient amount, meaning it's normal.” (Mother, 28 years; child, 2 months; Musoma)*

At 3–4 months when porridge is introduced for the first time, it is made watery because the child's stomach is being introduced to “new” food. At the age of 6 months, the child needs more food, and hence the porridge is made thicker and more energy dense. Other additional soft foods are introduced from 4–6 months; these are soft-cooked beans, “ugali”, potatoes, banana, fish, and cooked rice.

What was observed from the findings was that once supplementary foods are introduced, the child is breastfed less. Belief that the supplementary food introduced would improve the health status of the child was among the reasons for early supplementation. Mothers believed that porridge and ingredients added to the porridge would improve the health of the child, especially when the weight of the child was considered low.

*“I also started to give her berries at the fourth month because I observed that when she eats them her health improved, like weight gain and intelligence. You could see she is happy and charming.” (Mother, 22 years; child, 9 months; Ngara)*

During lactation, mothers consulted family members, neighbors, and friends for information regarding what to eat during breastfeeding, particularly to increase breast milk quantity. Health service providers also gave mothers advice on the types of food to consume during breastfeeding. Health service providers and CHWs were reported to play a positive role in influencing women to adopt recommended feeding practices. Advice received from the health service providers was trusted and regarded as the most credible source.

## 4.7 Contraceptive Use in the First 6 months After Birth

Mothers, fathers, and grandmothers had heard of family planning and generally had some knowledge of the different FP methods. There were mixed perceptions on FP, with some offering positive feedback on the benefits, whereas others expressed concerns.

*“...what are your opinions on using family planning?...I think it helps in planning a better future for your children...as entrepreneurs, family planning would help us plan for the future.” (FGD, fathers, Musoma)*

*“But family planning has so many side effects for women. You find a woman who is using implants bleeding for the whole year, bleeding even during the time she is planning to have another child...Family planning is affecting them.” (FGD, fathers, Rorya)*

Overall use of contraceptives was very low. Out of the 12 mothers interviewed who had children under the age of 6 months, only two reported that they were using contraceptives (implant and injectables [depo]. For many of the mothers, the main reasons for not using contraceptives was not having seen their periods, or that the child was still breastfeeding.

*“No, I am not using any family planning; I have not resumed my periods.” (Mother, 18 years; child, 3 months; Ngara)*

*“No [not using a family planning method]. I will start once my child stops breastfeeding.” (Mother, 18 years; child, 3 months; Rorya)*

The view that FP should only be used by women once they start seeing their menses was also reinforced in FGDs with fathers and in interviews with grandmothers:

*“Family planning should be used soon after a woman resumes her monthly periods.”(FGD, fathers, Ngara)*

*“A woman cannot conceive before her periods resume even if it takes 3 years, so she will not be using family planning.” (Grandmother, Ngara)*

Despite low levels of use of FP methods, it was reported that women resume sexual relations as early as 1 month after giving birth. Early resumption of sex was mainly attributed to lack of patience among men or fear among women that they will lose their husbands to other women if they delay resuming sex. The findings from the field reveal that women may be at risk of conceiving, especially because they are not practicing exclusive breastfeeding. Hence, they may be fertile much earlier than expected, have resumed sex, but are not using contraception.

## 4.8 Knowledge, Perceptions, and Use of LAM as a Family Planning Method

### 4.8.1 Knowledge and perception of LAM

Knowledge of LAM was very low among mothers, grandmothers, fathers, and TBAs. Some had heard of using breastfeeding for birth spacing, but they were not able to explain the three criteria for effective LAM use. In their discussions mothers did not talk about the fact that for breastfeeding to work as a FP method, it is important that the mother *exclusively* breastfeed.

*“...what I know is that if the mother is breastfeeding she cannot get pregnant.” (Mother, 18 years; child, 8 months; Musoma)*

*“I once heard that when a woman is breastfeeding, she does not get her menstruation period. It only starts when she stops breastfeeding, so it can be used as a method of family planning.” (FGD, fathers, Rorya)*

*“...there are two types of women: some breastfeed and do not get their menses, and others get their menses....Breastfeeding is a contraceptive for those who have not started their menses....” (FGD, fathers, Tarime)*

Mothers interviewed recognized a relationship between breastfeeding and birth spacing, but they largely believed that they would be protected from pregnancy for as long as they were breastfeeding, regardless of the frequency or duration of breastfeeding. Women also linked this protection to the fact that their menstruation had not returned: Breastfeeding for a long duration was seen as being linked to delay of menses. However, women also discussed the fact that some women’s menses returned even while they were still breastfeeding. Some women said that they had heard that breastfeeding helps birth spacing, but they did not trust the method because so many women breastfeed and don’t see their menses but still get pregnant. Several respondents expressed concerns about whether LAM is a method that mothers can actually adhere to. This concern was shared by fathers and health service providers.

Some men in the FGDs also doubted the effectiveness of LAM as a FP method:

*“...using exclusive breastfeeding as a family planning method is not a good method, and it is difficult to use....It depends on one’s genetics.” (FGD, fathers, Muleba)*

On the other hand, some fathers expressed positive views about using breastfeeding for birth spacing, especially due to the fact that it is a safe method with no side effects.

*“...I think this is a good method [LAM] because it does not have side effects compared with shots and implants. A mother will be in good health more if she is using breastfeeding as a method of family planning.” (FGD, fathers, Rorya)*

Knowledge on LAM among the CHWs and health service providers was mixed, with some demonstrating a better understanding of the method and others demonstrating poor understanding and/or distrust of the method.

*“...we advise that she should use breastfeeding as a family planning method if she has not seen her periods. Secondly, she should breastfeed during the day and at night as many times as possible, and the method can only be used for 6 months. After that, she has to use another family planning method.” (FGD, CHWs, Muleba)*

*“It is a good method because there are no costs...it does not cause any inconveniences...it is easily available.” (FGD, CHWs, Muleba)*

*“...Breastfeeding is very good for mothers. If she continues to breastfeed the baby for up to 2 years, she won’t get pregnant until she stops breastfeeding. ...What criteria do you use in advising mothers on LAM? ...mothers should breastfeed their baby frequently, and a mother should not be very busy.” (Health service provider, Musoma)*

#### **4.8.2. Challenges in the Use of LAM as a Family Planning Method**

None of the mothers who had children under the age of 6 months reported that they were using LAM as an FP method. There were mothers who reported to be exclusively breastfeeding, but when asked what FP method they are using, they reported not using any method. It is our observation that first and foremost, knowledge about LAM is limited in the study communities. Secondly, there are perceived difficulties of adhering to exclusive breastfeeding, the effectiveness of the method is questioned by some respondents, and LAM is not considered an effective or feasible FP method. As a result, many health service providers do not proactively discuss LAM as a postpartum contraceptive option.

*“This method [LAM] is not preferred by many. That is the reason we advise mothers to use other methods....It is a method that is not well known in the community, and we are not very sure women will be able to follow it properly. That is why we are advising them to use other methods of family planning.” (Health service provider, Misenyi)*

*“What advice do you give women about family planning immediately after giving birth? We tell them the meaning of family planning and the benefits of family planning, the different family planning methods, and that after 42 days, they are supposed to come back for family planning services.” (Health service provider, Muleba)*

# Chapter 5: MIYCN and FP Practices

## 6–12 Months after Childbirth

The main focus of this chapter is on feeding for infants 6–12 months of age, as well as women’s postpartum FP practices.

### 5.1 Complementary Feeding Practices 6–8 Months of Age

All mothers with children above the age of 6 months reported continuing breastfeeding their children. Most mothers reported the desire to breastfeed their children for 2 years, with some mentioning a desire to breastfeed for up to 3 years. The main reason for continued breastfeeding was the perceived value of breast milk to the health of the child, as stated by two mothers interviewed:

*“What makes you continue breastfeeding? I want him to grow big and be able to walk early. I don’t want my baby to be stunted, because when [they do] not breastfeed, they don’t grow well.” (Mother, 18 years; child, 7 months; Rorya)*

*“...yes she is still breastfeeding because she is still a small baby and she still needs her mother’s breast milk to get nutrients and good health. (Mother, 18 years; child, 8 months; Musoma)*

Most mothers introduced foods early prior to 6 months of age (as discussed in detail in chapter 4), however, they also continued breastfeeding their children beyond 6 months of age, which is consistent with global recommendations. However, what is noted from the data collected is that the breastfeeding patterns changed from breastfeeding “on demand” or “frequently,” as mothers termed it, to a more spaced/ planned breastfeeding schedule:

*“...currently, I plan for her breastfeeding in the morning, afternoon, and evening. I also get time to do other things. Otherwise, she would be breastfeeding all the time because as she continues to grow, she increases the rate of breastfeeding and that may weaken me. But because she gets additional foods, she doesn’t breastfeed all the time, just a few times to settle her stomach system.” (Mother, 31 years; child, 8 months; Rorya)*

On average, frequency of breastfeeding was reduced to an average of four times during the day, which is below the WHO recommendation of continuation of frequent breastfeeding on demand, day and night (at least six times), for children 6–11 months of age. By 12 months of age, mothers should continue breastfeeding on demand, day and night. The frequency of breastfeeding decreased during the day, especially at 9–11 months, and the main reason cited was that at this age, children eat more solid foods (they eat with other family members). There were no differences in the frequency of breastfeeding during the night, because this was reported to be mainly on demand, and also because there was nothing else the child could be given at night (it was not possible to prepare porridge). Mothers did not mention waking children up to breastfeed during the night.

However, during the night it was reported that children continued breastfeeding much more than they did during the day. A mother of an 8-month-old baby reported breastfeeding her child four times during the day and four times during the night. During the day, children at the age of 6 months are fed more on other foods and not so much on breast milk. A mother of a 10-month-old baby reported giving porridge to her child in the morning. In the afternoon, the child is given cooked banana or ugali, and the same meal is offered at night as dinner. Another mother said:

*“After she breastfeeds in the morning, she wakes up around 11:00 a.m., when she gets porridge or milk. She will then breastfeed in the afternoon. When I come from my work, she gets some food at around 2:00 p.m., which can be porridge or milk. Later on, I breastfeed her, but in the evening, I don’t give her porridge to avoid constipation.”“ (Mother, 31 years; child, 9 months; Rorya)*

Generally, mothers said that first foods for infants were primarily carbohydrates (potatoes, porridge, banana, ugali) with limited introduction of vegetables and fruits, and protein sources, such as meat and beans. By 6 months of age, mothers in all the study sites discussed feeding children thicker, more energy-dense porridge and soft ugali made from cassava, maize, or millet flour. Millet is a staple food, especially in Mara region, and is believed to be nutritious for the child. In Mara they use millet to cook ugali (meals for lunch or dinner), and the same flour can also be used to prepare porridge for the child. Porridge was introduced because it was seen as a food that was “light” and soft and could be easily digested by the child. In Kagera region, mashed banana was reported more frequently as a first food for infants than porridge or ugali, as banana is a common staple food cultivated in the area.

*“...at that age (6 months) a child can be given porridge made from flour that is a mixture of groundnuts, cassava, and maize” (Mother, 17 years; child, 2 months; Muleba)*

*“The porridges commonly used were those made from cassava flour, maize, or millet flour... but a baby starts with porridge, milk, ugali, watery rice, fish, and bananas at the age of 6 months. The baby continues to be given these foods until the age of 12 months.” (FGD, fathers, Rorya)*

*“...at this age (6 months) you can start giving her other foods like porridge made of cassava, millet, milk, and sugar.” (Mother, 17 years; child, 10 months; Misenyi)*

Mothers also discussed adding soya beans or groundnuts, sugar, and/or milk to porridge. Many mothers stated that this “enriched” porridge is good for the child's health and development. This view was shared by fathers, as illustrated in this quote, “I would advise the mother to start giving the baby some porridge made with millet; it has some vitamins.” Although mothers explained that they mainly introduced other foods early because of perceived insufficient breast milk, the types of foods introduced were not merely for the sake of filling the child's hunger, but had perceived nutritional value.

Listening to mothers talk about what they give their children from the age of 6 months, we note that mothers have a way of rationalizing why certain foods were better than others. Mothers categorized “good” or “bad” food that is suitable for children of a certain age. Food was categorized as being of “good” quality if it made the child “full and satisfied.” The structure of the food was one of the rationales behind food choices. Cooked banana and potatoes were considered foods of “good” quality because they were easy to cook to achieve a soft consistency suitable for infants.

## 5.2 Complementary feeding practices, 9–11 months

By 9 months of age, children were introduced to more solid foods with greater diversity, and children often ate family foods.

*“What does the baby eat at 9 months? He eats normal food like stiff porridge, bananas, cassava, beans, peas, and peanuts.” (Mother, 22 years; child, 10 months; Misenyi)*

*“I started to give him solid foods at 9 months because previously he had no teeth. I started by giving him soft bananas, but I did not mash them as when he was 6 or 7 months. He was also taking porridge, or tea when I did not have porridge flour.” (Mother, 17 years; child, 12 months; Muleba)*

Introducing beans and fish as portions of meals was mainly reported when the child was 8 to 9 months of age.

*“I started to give him fish at 9 months, but not meat because I know it may get stuck in his throat and cause other problems...When did you start to give him fish or meat? Not yet; maybe a little bit of fish at around 8 to 9 months when he started to have teeth. I used to remove the fishbones and feed him.” (Mother, 15 years; child, 9 months; Musoma)*

Across all respondent groups, poverty was mentioned as a critical barrier to optimal child feeding practices. Poverty was discussed as affecting the variety and the quality of foods families were able to offer their children. Lack of income was mentioned as an obstacle to providing children with food that parents or community leaders believed to be nutritious. In the FGDs with community leaders, when pictures were shared showing different types of food, they would say that it was not possible for families to afford foods that they do not produce. For mothers in Ngara and Misenyi, access to fish was noted to be a challenge, compared with mothers in Tarime, Musoma, and Rorya, who reside along the lake and can easily catch or buy fish.

*“Many cannot afford to buy fruits.” (FGD, fathers, Musoma)*

*“Most of the food given is carbohydrates and seasonal fruits, banana and oranges....We cannot afford to keep cattle for milk or meat.” (FGD, fathers, Tarime)*

Participants said that the availability and access to food was also influenced by seasonal variations and distance to the market. We observed that families are highly dependent on their own agricultural production, which is impacted by seasonal availability of foods.

Food considered “bad” for the children was considered unsuitable for a certain age, and/or mothers felt children were “not ready” to eat certain kinds of foods, which are subsequently withheld from the child’s diet. Infant feeding is strongly shaped by the customary sharing of family meals with a child starting from 8 to 9 months of age. At this age, children are considered developmentally “ready” for family foods and solid food because they have teeth, and their digestive systems are ready to digest the solid foods, such as ugali, rice, potatoes, and beans, which are consumed by other family members.

On average, children are given three meals per day throughout the 6–12 month period. However, during interviews, some mothers noted that at the age of 6–8 months, children are given an average of four meals per day. But at the age of 9 months, more solid foods are introduced (ugali or banana), and children were given an average of three main meals per day. Giving children fruits or tea was not defined as a “meal;” a meal was defined as food that is cooked and eaten by the family for breakfast, lunch, and dinner.

*“The child is fed three times: at 9:00 in the morning he gets porridge, in the afternoon he eats bananas, stiff porridge, or cassava, and at night are the same meals as in the afternoon.” (Mother, 22 years; child, 10 months; Misenyi)*

*“In the morning he gets either tea or porridge, in the afternoon we eat together, and the same applies in the evening...What solid foods do you feed him now?...stiff porridge, banana, cassava together with pampan, mangoes, and pineapples.” (Mother, 17 years; child, 12 months; Muleba)*

*“She eats four times: in the morning, afternoon, evening, and at night.” (Mother, 18 years; child, 8 months; Musoma)*

Mothers are primary decision-makers with regard to what foods and when to feed their children, although in some instances the father, grandmother, and mother-in-law also influenced the kind of food the child was given. Most fathers control how money is spent at the household level, so they have a role in influencing household food choices.

*“In our community, it is the father who makes decisions....The father will suggest eating ugali and fish.” (FGD, fathers, Musoma)*

*“Our culture is patriarchal, but a woman is the one who plans the budget, so she can give the baby whatever food that is available...”* (FGD, fathers, Tarime)

If the grandmother is residing in the same household, she may also participate in feeding the child. Mothers reported that the father’s role was mainly to ensure that money was available for the family to buy food and rarely took up the role of feeding children.

## **5.2 Uptake of Family Planning 6–12 Months after Delivery**

### **5.2.1 Family planning practices among women 6–12 months after delivery**

Data collected in the study sites indicate that use of FP by 6 months after delivery is still very low. Only two out of 12 mothers with children above the age of 6 months reported using a modern FP method. The two mothers had children aged 9 and 10 months and were using depo. The main reason cited for choosing depo was that it was much easier to use than the pill. Both women reported discussing their intention to use FP with their husbands. Mothers who had not started using an FP method cited a number of reasons that will be discussed in detail in the following section.

### **5.2.2 Barriers to family planning uptake**

The timing of FP method uptake was dependent on a number of factors. First and foremost, women believed that they are protected from a subsequent pregnancy because they are breastfeeding, regardless of the frequency and duration of breastfeeding:

*“I have not yet started to use family planning, but I am planning to use it after I stop breastfeeding my son....When do you expect to stop breastfeeding him?...when he turns 1 year and 2 months.”* (Mother, 18 years; child, 3 months; Rorya)

*“A mother should start contraception when a child reaches 2 years, as that is the time to stop breastfeeding. A mother should be advised to go to the public health center for more advice on birth control.”* (FGD, CHWs, Musoma)

However, given that women exclusively breastfeed for a short time, in some cases for even less than 3 months, they are sometimes unknowingly exposing themselves to the risk of pregnancy. This is especially the case if they are relying on breastfeeding and have already resumed sexual activity. Mothers reported that women in their respective communities resume sexual relations very early, as early as 1 month after giving birth:

*“One month [after giving birth] is when you can have sex with a man....”* (Mother, 31 years; child, 1 month and 2 weeks; Misenyi)

*“After what time does a woman who has given birth resume sexual relations with her partner?...after 1 month....Why after 1 month?...her blood flow would have stopped at that time.”* (Mother, 22 years; child, 9 months, Muleba)

Some reported that health service providers required that a woman see her menses before initiating FP:

*“I was told at the health facility I should wait until I resume my periods to start using family planning.”* (Mother, 31 years; child, 1 year; Muleba)

*“No, I am not using any family planning. The CHW advised me to wait for my periods to resume.”* (Mother, 31 years; child, 1 month and 2 weeks; Misenyi)

Another challenge preventing women from initiating use of a modern contraceptive method was concerns about side effects shared by the mothers, fathers, and grandmothers in the community. Fear of modern contraception is widespread in all study sites. In FGDs and interviews, men and women discussed their

concerns with FP methods. A mother of a 9-month-old baby explained that she had not started using any contraceptive method because of what she had heard from her mother and other people in the community:

*“I am not using any method; they say injections cause a lot of problems. My mother says she has backaches and she bleeds everyday due to use of IUDs. Others say [the methods] make them gain weight....The nurse told me to use the injectable family planning method or IUDs. When I came to tell my mother, she said they can make me sick.... When I heard that, I was discouraged to go back to the nurse and ask her.”(Mother, 15 years; child, 9 months; Musoma)*

*“There are two family planning methods, that is, injection and intrauterine device, each of which has its effects. The former causes a mother to be fat and the latter to be slim.” (FGD, fathers, Musoma)*

*“But family planning has so many side effects for women. You find a woman who is using implants bleeding for a whole year, bleeding even during the time when she plans to have another child.” (FGD, fathers, Muleba)*

*“Women who are using family planning have poor health. For instance, using the intrauterine device harms a mother’s health, and still you have to spend 70,000 shillings to remove it. It has reached a point that family planning does not help, but rather brings some problems to us.” (FGD, fathers, Rorya)*

Another obstacle to FP uptake among postpartum women is their husband's opposition to the use of modern FP methods. The main reasons reported for the husband's refusal were linked to fear of the side effects of the methods. Husbands had a significant role in deciding whether or not their wives use a FP method:

*“Who makes the decision to use family planning in your family? ...my husband is the one who decides.” (Mother, 18 years; child, 8 months; Musoma)*

*“The one who decides on using family planning in this area is the man. The marriage will fall apart if the woman decides on her own to start using family planning.” (FGD, fathers, Rorya)*

*“Many men refuse to allow their wives to use family planning, so they have to hide that they go to the health facility to get an injection or pills without the husband knowing because the husbands want them to continue having children. Many men do not have adequate knowledge, and some of them refuse completely.” (FGD, CHWs, Muleba)*

Discussions with partners about FP use or intention to use FP were limited. Only 15 out of the 24 mothers interviewed reported discussing FP with their partners. This was despite the fact that all mothers reported that in an ideal situation, it is important that couples discuss FP use and reproductive intentions. Discussions about FP use or intention to use were carried out during the pregnancy period and also after delivery. It was reported that partners would discuss FP use based on the desire to space/limit the number of children. As noted above, fear of side effects was reported as an obstacle to men agreeing to discuss FP use.

Negative perceptions among community members about women using modern contraception were also identified as a main reason women refrained from using contraceptives. Using contraception was linked to the belief that a woman was not being faithful to her husband: she decided to use FP to become free. A woman “being free” was defined as a woman not having the responsibility to take care of children, especially when FP methods are linked to infertility, and hence, she has time to engage in sexual relations with other men.

Challenges identified by health service providers that prevented women from taking up FP were partner’s refusal, distance to the health facility, and women being busy with income-generating activities.

*“Men are against using birth control methods....Women also face challenges in accessing family planning services because of the long distance to the health facility, leading them to fail to attend clinic on time.” (Health service provider, Misenyi)*

*“Transport to the health facility: Some mothers ignore seeking family planning services because they live very far from the health facility. And others don’t come because their spouses won’t allow them to, while others are busy with their income-generating activities.” (Health service provider, Musoma)*

This study also revealed a missed opportunity for close interaction between health service providers and mothers during the growth monitoring and immunization visits. Very few of the women reported having discussed FP needs with a health service provider. Most of the FP discussion sessions were more “general” sessions that were conducted when mothers waited for immunization or growth monitoring services.

*“When you take your son to the health facility for immunization, does the health worker talk to you about family planning? ...No one talks to me, but they usually make an announcement about family planning: The nurse says mothers should be on family planning through the Green Star.” (Mother, 18 years; child, 3 months; Rorya)*

### **5.2.3 Motivators for uptake of family planning**

The timing and uptake of an FP method was often discussed in relation to timing of the resumption of menses. The return to menses is taken as the first sign of the return to fecundity. Women reported resuming sexual relations without the use of a contraceptive method because they had not seen their menses. Women reported that they were waiting for their menses to resume before they started thinking of using a modern FP method:

*“What will motivate you to start using a family planning method in the near future? ...until I see my periods, and I can only go when I see my periods.” (Mother, 25 years; child, 1 month; Musoma)*

*“Are you planning to use family planning? I am still planning.... Why? I have not seen my periods since I started breast feeding.” (Mother, 27 years; child, 8 months; Musoma)*

For mothers and health service providers, the return of menses was an important factor when planning postpartum pregnancy prevention. Women explained that once a woman sees her menses, she should either abstain or think of using an FP method. For them, it is the menses that make it possible for them to become pregnant. Resuming menses as a cue to fecundity was also shared by fathers and CHWs.

*“Sometimes the women have blood that is boiling fast. You find she has delivered and within a month she gets her menstrual cycle. Others have heavy blood. You find she finishes even 9 months and she hasn’t seen it. So when she sees her menstrual period/cycle, that’s when you should start to take the contraceptives for family planning.” (FGD, fathers, Ngara)*

*“Women are different. Some start having their periods after 6 months, and others even after one week.... For such a woman, we advise her to use family planning immediately to avoid unplanned pregnancies.” (CHW, Muleba)*

*“...when are women at risk of getting pregnant after giving birth? ... Anytime, but especially when they have started getting their periods.” (Health service provider, Ngara)*

*“...when is a mother in danger of conceiving after giving birth? ...Soon after having seen her periods resume.” (Health service provider, Rorya)*

It is clear from the findings that women want to avoid pregnancy, especially in the first year postpartum. Women's concern during the first year postpartum was mainly focused on the welfare of the newborn baby. Hence, it would be helpful to provide an opportunity for them to think about how they would prevent pregnancy. However, many relied more on breastfeeding and the fact that they have not seen their menses as their protective measure.

*“As for me, after 6 months I will go to the health facility for family planning ...as an early precaution not to conceive.... [The] child is still young.” (Mother, 31 years; child, one month and two weeks; Misenyi)*

*“I have not started using family planning; I am still discussing with my husband.... . . .I expect to start using this month because I have seen it is important, as I am tired of giving birth and I have enough children.” (Mother, 28 years; child, 2 months; Musoma)*

*“I have not started using any family planning, but I expect to do that once I have stopped breastfeeding my son.... and when are you planning to stop?...when he is 1 year and 2 months.” (Mother, 18 years; child, 3 months; Rorya)*

*“A mother who is using family planning, her child’s health will be good. But if she is not using family planning, the health of the child and her own health are poor. . . .for me, the moment you see your menses, you are supposed to go for family planning as soon as possible.” (Mother, 32 years; child, 1 week; Ngara)*

# Chapter 6: Community Initiatives in Promoting Breastfeeding, Antenatal, and Postpartum Care

This section includes a discussion of a number of community-based activities that are geared towards promoting breastfeeding and antenatal and postpartum care, including FP. We present an account of what is happening on the ground and how different community initiatives are trying to promote better health practices, based on feedback offered by study respondents.

## 6.1 Village Government Initiatives

In FGDs with village leaders, lack of appropriate breastfeeding and complementary feeding practices, fears and misinformation about FP, and poor antenatal and postpartum care were noted:

*“Challenges facing women on breastfeeding are poor education, lack of knowledge on breastfeeding, and not knowing the importance of available foods to a breastfeeding woman.” (FGD, community leaders, Muleba)*

*“Women can agree on family planning, but always the problems are with men, as the father of the house, he forbids his wife to go to use family planning.... Using holy words to justify his claim...that God says we should give birth and fill the world...” (FGD, community leaders, Ngara)*

A solution-generating exercise was carried out during the FGDs in which community leaders were asked to identify solutions for the barriers they had identified that affected proper MIYCN practices and uptake of FP. In all the FGDs, the most important solution cited was providing communities with information on MIYCN and FP. Knowledge on breastfeeding and appropriate complementary feeding practices, as well as maternal nutrition, was considered important, given that many mothers do not know which locally available foods are good for the health of the child and the mother during pregnancy or while breastfeeding. Information on FP was also considered important for both mothers and fathers, given the misinformation that communities have about FP that has resulted in very low uptake. Another solution that was mentioned in two out of the four FGDs was to help women to come up with income-generating activities. It was argued that once women are able to have an income, then household feeding practices will improve.

In efforts to address the mentioned challenges, village governments reported embarking on a number of interventions that can be divided into two main groups: those that foster behavior change and those that foster a supportive/facilitative environment.

To change behavior with regard to MIYCN and FP, village governments are using two platforms. The first platform is the use of volunteers. All the village governments that we talked to recruited what they call “village health workers.” These are individuals, similar to CHWs, who basically volunteer or receive a token incentive paid from the village government resources. The main role of the CHWs and village health workers is to sensitize communities on MIYCN and FP, among other things, as explained in the quotes below.

*“The responsibility of the village health workers is visiting the community, encouraging environmental hygiene, as well as encouraging, for example, women on how to take good care of their children.” (FGD, community leaders, Ngara)*

*“As community health workers, we visit villages and encourage people about sanitation, checking children with kwashiorkor, as well as emphasizing the importance of a balanced diet, especially on Thursdays when we also weigh children.” (FGD, community health workers, Ngara)*

The village health workers work very closely with the village health facilities providing education sessions to mothers during routine immunization and growth-monitoring visits. As explained by one of the village health workers during an FGD, “[We] provide education to women both who are pregnant and those with children when they attend clinics. We advise them to attend the clinics soon after they deliver, as some stop attending the clinic soon after delivery.”

Community leaders also reported that village health workers conduct household visits encouraging parents to take their children to clinics and educating parents on caring for their children. As related in another FGD, “Our health workers have the responsibility...They would make sure that they visit households and at any given opportunity they would provide education....”

Groups formed in the village as part of the local initiatives included self-help groups or loan groups, which are part of village government initiatives to disseminate information on MIYCN and FP. As discussed by a participant in an FGD with community leaders:

*“There are groups which we use to educate ourselves on family planning and through those groups there is a plan of creating by-laws on nutrition and family planning.”*(FGD, community leaders, Muleba)

Community leaders also mentioned disseminating information on proper MIYCN practices and the promotion of FP through village meetings. Village leaders reported inviting health service providers or the village health workers to provide sessions on MIYCN and FP. Another initiative carried out by the health facilities with support of the village government is to put in place a bylaw that every woman attending ANC for the first time should be accompanied by her husband. This has been put in place to encourage men to take part in reproductive health matters, and it is also a good opportunity for the men to access MIYCN and other health-related information.

*“...there is a law that requires a pregnant woman to be accompanied by her husband, otherwise she will not receive care.”* (FGD, community leaders, Ngara)

Village governments also facilitate an environment supportive of gender equality (i.e., involvement of women in decision-making) and promotion of community engagement in income-generating activities to improve household food security.

*“In the public meetings, we tell them that the responsibility to take care of the family is for both the father and mother. The father should also make sure that the child is properly fed.”* (FGD, community leaders, Tarime)

One of the strategies discussed in FGDs with village leaders was to sensitize communities to be part of the Tanzania Social Action Fund (TASAF) work program: “We are helping the society to increase income in order to get those types of foods through TASAF.” TASAF is currently implementing a Productive Social Safety Nets (PSSN) project. One of the components of the PSSN program is the Public Works Program (PWP), which recruits members of targeted poor households and offers an opportunity to undertake paid work, which enables them to afford to buy food.

## **6.2 Activities Supported by Nongovernmental Organizations**

Nongovernmental organizations working in the study communities were also noted to support community initiatives that promote MIYCN and FP. Trained CHWs, supported by NGOs collaborating with the government, play an important role in promoting MIYCN and FP through household visits with pregnant women and with families with children under the age of 2 years. The number of visits varied among the CHWs, depending on the number of households. On average, CHWs indicated that they made four visits per household. The first visit was reported to take place during the first trimester of the pregnancy; the second visit at 5 months, the third visit at 8 months of the pregnancy, and the fourth visit after delivery. During household visits, mothers were advised on a number of issues:

*“We advise them to register for maternal clinic, reduce her workload, and be tested for HIV/AIDS. [We advise mothers] about nutrition issues during pregnancy and going for vaccination in a health facility.... We discussed delivery in general, preparing things that will be used during delivery, socks, transport, an escort to the health facility for delivery, finding someone to stay with the children when she goes for delivery, and some money for some important needs during delivery.” (FGD, CHWs, Musoma)*

Mothers relayed receiving information from CHWs during the household visits.

*“She gave me advice on breastfeeding and feeding the baby [complementary feeding] and also on observing danger signs of the baby in case he gets sick: I should take the baby to the hospital. She also advised that after 6 months I should start giving the baby porridge.” (Mother, 22 years; child, 5 months; Misenyi)*

Pregnant women and their families were willing to listen to the CHWs. It was noted that the use of CHWs was a good avenue for reaching men who still dominate economic power and related decision-making in the household, and hence have an influence on MIYCN and FP outcomes at the family level.

The main challenge that CHWs reported was lack of transport, especially since they cover large areas, which affects their ability to reach mothers at targeted times. This is also compounded by the number of households each CHW is expected to visit. Given that there are not so many CHWs in each of the villages, CHWs reported having an average of 60–120 households that they were responsible to visit. They noted that this affected their efficiency, because in a number of cases, they were not able to make at least an average of four visits per household for pregnant women. Being a CHW was not a full-time paying job (they only received a small NGO-supported allowance), so CHWs also needed income-generating activities to sustain their families, which limited their time for visiting families.

# Chapter 7: Communication and Information Channels

Accessibility and availability of health information is vital for improving MIYCN and FP practices. In exploring where mothers and pregnant women receive information on health and nutrition, mothers were asked to list the different sources of information. Their two main sources of information were interpersonal and mass media sources. Interpersonal sources included facility health service providers, community health workers, village health workers, family members, and friends. Mass media sources included radio, posters, and leaflets.

## 7.1 Interpersonal Sources of Communication and Information

In interviews, the majority of the mothers identified health service providers and community health workers/village health workers as their most frequent sources of information. The majority of the mothers indicated that health service providers are their primary source of information for health advice, alongside family members, as illustrated in the quotes below:

*“Whom did you consult for advice on foods to eat during pregnancy?...A nurse.... Who used to advise you about what to feed an infant in the first six months? ...A nurse...Whom did you consult to get advice about how to plan for or prevent the next pregnancy? ...A nurse ...yes, she used to advise me well that I shouldn’t conceive again, to use family planning because I am not married.”* (Mother, 17 years; child, 8 months; Misenyi)

*“Where did you go for advice on food to eat during Mkwaji’s pregnancy? .... I got the advice from the nurses, my mother, and husband...What about the food to give the baby?... the nurses, my mother, sister-in-law, and mother-in-law.”* (Mother, 18 years; child, 8 months; Musoma)

Community and village health workers were also identified as an important source of information for mothers. Given their flexibility to visit women in their homes or that they resided in the vicinity, they were also identified as an easily accessible source of information.

*“The health worker (CHW) would come here...and explain to me about the foods to eat, and she advised me to attend clinic to be examined, so I followed her advice. She used to find my husband, too, and told him about the clinic issues....The health workers said that a child is supposed to be breastfed up to 6 months; that is when to start giving foods. Before 6 months, it is exclusive breastfeeding; [the child] should not be given anything else...To whom did you go for advice about how to plan for or prevent the next pregnancy from happening very early? It is through the health workers who visit us here. They tell us that we are supposed to go for family planning early, not to wait, as I may conceive again unexpectedly.”* (Mother, 31 years; child, 1 month and 2 weeks; Misenyi)

*“What advice did you receive from the community health worker?... it was mainly to encourage us to use bednets because malaria is common during pregnancy. So they normally encourage us to use bednets, the square ones that we were given at the health facility, depending on your family size.”* (Mother, 32 years; child, 1 week; Ngara)

As noted above, mothers/mothers-in-law and husbands were also cited as a source of information regarding foods mothers should eat during pregnancy and while breastfeeding, as well as advice on infant and young child feeding practices.

*“Who advised you about the foods you eat now that you are breastfeeding?...It is my husband, and I, and at the hospital when we attend clinic, they tell us to eat foods such as banana, stiff porridge, rice, and any other nutritious foods...[My husband] advises me to take nutritious meals, such as green vegetables, meat, and fish.”* (Mother, 23 years; child, 2 months; Tarime)

*“During your pregnancy, whom did you consult to get advice about what to feed an infant during the first 6 months? ... I followed advice from my grandmother and mother... They advised me to give him porridge after 6 months. Then when he was 7 to 8 months, I started to give him some foods, such as banana, which I cooked and mashed to make them soft. ... my mother told me to cook soft bananas, and I gave [them to] him when he was 6 to 7 months... I followed [what my mother and mother-in-law said] because they also had children... My grandmother and my uncle’s wife used to advise me, but most people used to tell me to watch over the baby, that breast milk should not get into his nostrils, which can affect the child when you slumber, or you may find the child dead when breast milk blocks his nostrils.” (Mother, 17 years; child, 12 months; Muleba)*

Mothers trust information received from the health service providers and community/village health workers.

*“Who has been advising you about the foods you are supposed to eat now as you breastfeed? My mother, she advises me to take porridge to have breast milk. The nurse also tells me to eat and be really filled, especially porridge and soup. Whose advice did you follow? From both of them because they were advising me well. Because I have the child, when I ate and was filled well, the child breastfeeds well.” (Mother, 17 years; child, 8 months; Misenyi)*

*“We get information at the health center and from the health workers at the village clinics, where they motivate us to go for family planning ... And [when] we go to the antenatal/ postnatal clinic, family planning is the first talk that we start with.” (Mother, 31 years; child, 1 month and 2 weeks; Misenyi)*

Other sources of information identified were other women in the community. Women also reported that in their groups they get access to information by talking with other women about various health topics, including FP and nutrition. Information on the availability of FP services was also disseminated to mothers through loudspeakers in the villages.

*“When we attend postnatal clinic with our children, they announce a date for family planning. Then, when the date arrives, they go [for FP], be it implants or pills or injections. They even announce around the village through loudspeakers..... a person may be affected by methods like implants by losing weight, slimming, bleeding heavily, and becoming weak. One woman told me she used implants and experienced a heavy bleed and being weak.” (Mother, 17 years; child, 12 months; Muleba)*

*“Where do you get information with regard to family planning and nutritious feeding?... women of 25 years and above have their associations where they discuss a lot of things.” (Mother, 17 years; child, 5 months; Misenyi)*

Although none of the mothers mentioned TBAs as a source of maternal health information, interviews with the TBAs indicate that they provide key health and FP information to mothers:

*“What are your responsibilities in this community with regard to maternal and child health? To sensitize women to use family planning methods. At times I provide them with pills and condoms. I also advise mothers to use family planning methods like contraceptive pills and injections and that it is important to space their children, and, where possible, they should have a 5-year interval... what about men’s response on the use of family planning? Many men will also come to listen to the advice that I give to their women. They are now responding positively to their wives’ using family planning.” (TBA, Ngara)*

From the FGDs with community leaders, and as noted above, village meetings were also used as platforms to disseminate health information, including on FP and nutrition.

## **7.2 Mass Media Sources of Communication and Information**

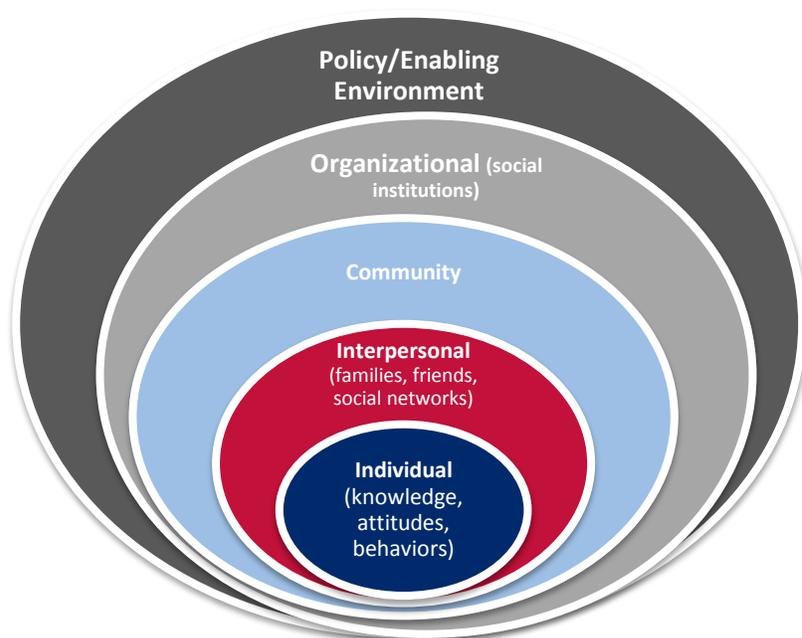
Few mothers mentioned mass media (radio, posters, and leaflets) as sources of maternal and child health information. We asked women and men if they had received any health-related information through their mobile phones, but very few said they had. Respondents mentioned that phones are sometimes shared between husbands and wives.

Overall, the study shows that mothers receive a wide range of information covering ANC, delivery, maternal nutrition, breastfeeding, complementary feeding, and postpartum care. The findings suggest that women seek information to help them solve their maternal health problems and to make informed decisions on MIYCN and FP, and women consulted various information sources. The predominance of the health service providers and community/village health workers as sources of information clearly suggests that women feel more comfortable obtaining health information from sources supported by the health care system, which they consider trustworthy and important.

# Chapter 8: Programming Opportunities and Recommendations

The results of this study reveal a number of motivators and barriers with regard to promoting MIYCN and FP practices. To better understand the multiple dimensions of MIYCN and FP practices, we used a socio-ecological model as a framework to link MIYCN and FP behaviors to the broader social, economic, and policy context in which behavior occurs. Focusing on the different levels within the framework (individual, interpersonal, institutional, community, and policy level), we then explore how best MIYCN and FP practices can be improved. The model allows an understanding of the multifaceted and interactive effects of personal and environmental factors that determine behaviors, and it allows identification of behavioral and organizational leverage points at which to intervene.

**Figure 1: The Social Ecological Model<sup>3</sup>**



The comprehensive approach evident in the socio-ecological model will involve interventions at the national level, the health system level, community level, and individual level. Hence, the recommendations below emphasize barriers that need to be addressed, and facilitating factors that can be built upon to improve MIYCN and FP practices in Tanzania.

## Recommendation 1: Strengthen the Policy and Enabling Environment for CHWs

At the national level, the policy environment needs to be supportive of MIYCN and FP services. One of the issues coming out clearly from the study findings is the central role played by CHWs in supporting optimal MIYCN and FP practices. Given the limited number of CHWs and the structure of their engagement (volunteering), their ability to reach all families requiring their services is compromised. CHWs described their

<sup>3</sup> Source: Adapted from the Centers for Disease Control and Prevention (CDC), The Social Ecological Model: A Framework for Prevention. See: <https://www.cdc.gov/nccphp/dnpao/state-local-programs/health-equity/framing-the-issue.html>

heavy workload, given the number of households that each had to visit, while at the same time working to support their own families. There is a need to increase the recruitment of CHWs without jeopardizing the quality of services offered. At the same time, CHWs should be integrated into the formal health care system to better serve the communities.

## **Recommendation 2: Address Health Systems Barriers**

Promoting MIYCN and FP practices will also require intervening at the health system level. Fewer than half of the women interviewed had not received a visit from a CHW during the whole time they were pregnant and are now nursing. There is a need to increase the recruitment of CHWs and integrate them into the formal health care system without jeopardizing the quality of services.

Mothers reported limited understanding about optimal MIYCN and FP practices despite their frequent contact with the health facilities. Health facilities need to be supported to be able to adopt best practices that are supportive of optimal MIYCN and FP practices. Health service providers should receive additional mentorship and support to improve their counseling and service delivery practices surrounding MIYCN and FP. This may require incorporating opportunities for values clarification to address perceptions hindering high-quality service provision.

It is important that health facilities not operate in isolation from the adjacent communities they are serving. Stronger links need to be established between the communities and health facilities, with the CHWs acting as a link between the two. The role of CHWs in following up on service provider recommendations and referral follow-through could be further strengthened.

## **Recommendation 3: Promote Community-Based Approaches**

At community level, strengthening community-based counseling services and improving the capacity of CHWs will have a positive impact on providing the much-needed MIYCN and FP information and addressing the misconceptions surrounding MIYCN and FP. Improving the capacity of CHWs will enable them to capitalize on the contacts that they have with mothers, fathers, and family members to provide MIYCN and FP information and services. Community-level intervention could also benefit from the establishment support groups for mothers and fathers to help them practice optimal MIYCN and FP behaviors within an enabling environment of peer support.

## **Recommendation 4: Promote Community and Family Support for MIYCN and FP**

Another intervention that is likely to improve MIYCN practices (especially optimal feeding practices) is the promotion of social support through the engagement of older mothers/grandmothers and fathers. Infant and young child feeding is clearly a social practice involving both the breastfeeding mother and key influential family members, including the male partner and older female relatives (mothers/mothers-in-law). Mothers often had to balance their time between breastfeeding and household chores. The involvement of fathers and other family members to assist in caring for the older children and housework will support mothers to have enough time to breastfeed their babies, especially in the first 6 months.

Our findings also highlight the need to address key misconceptions and drivers of food choice, early introduction of foods and liquids prior to 6 months of age which disrupt exclusive breastfeeding and identifying ways to achieve dietary diversity for infants and young children. Innovative approaches need to be put in place that will engage older women/grandmothers and fathers and coach them to provide positive social support, which is key for improving maternal and child health. Income generation and savings-and-loans opportunities could be explored to address financial barriers to a quality diet and alleviate pressure for women to return to work soon after delivery, which hinders exclusive breastfeeding.

Study communities acknowledged that men were the main decision-makers and influenced MIYCN and FP practices. Several mothers reported their husband's opposition as a reason why they were not using FP methods. At the same time, FGDs with men showed that men were interested in learning more about FP and had misconceptions about FP methods. Given men's interest in learning and their critical role as key decision-makers, exploring opportunities to engage men in MIYCN and FP matters and promote couple communication is recommended.

## **Recommendation 5: Fill the Information Gap on MIYCN and FP**

There was a dearth of information about optimal MIYCN and FP practices at the community level. As a result, communities experienced difficulties in navigating their way through the layers of barriers in adhering to and recommending the desired behavioral practices. Mothers had limited understanding of optimal exclusive breastfeeding practices and complementary feeding practices. Mothers discussed insufficient milk production as their main reason for not exclusively breastfeeding for the full 6-month duration, which was coupled with early introduction of foods and liquids prior to 6 months after delivery. Yet, health service providers and CHWs are not sufficiently counseling and providing support on ways to increase breast milk production, including increasing frequency and duration of breastfeeding. In addition, complementary feeding practices reveal limited dietary diversity and meal frequency, as well as limited understanding of the types of foods that children should be fed according to age. Study findings also point to variations in understanding of postpartum return to fecundity at community level, including perceptions that women are protected from pregnancy as long as they are breastfeeding or until their menstruation returns.

Providing tailored information, opportunities for engagement, and support to mothers and key influencers in the community (fathers and grandmothers), CHWs, and health service providers, could positively impact MIYCN and FP practices. Developing a social and behavior change strategy that addresses knowledge gaps and misconceptions about MIYCN and FP will be important for promoting optimal MIYCN practices and FP uptake.

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