

Formative Research for the Introduction of
Multiple Micronutrient Supplements in

BANGLADESH



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This report was prepared by a collaborative team comprised of researchers from icddr,b and The Pennsylvania State University. From icddr,b, Bidhan Krishna Sarker, Musfikur Rahman, Shakila Afrin, Maksuda Khanum, Farhana Karim, and Sk Masum Billah managed all fieldwork procedures in Bangladesh, as well as supported data analysis and interpretation of findings. From Pennsylvania State University, Ramakwende Zoma, Katelyn Kostakis, Rachel Bruning, and Stephen R. Kodish led the formative research design, data analysis, and report preparations. Contributing technical and financial support was provided by collaborators representing Bill & Melinda Gates Foundation (Alison Tumilowicz), Sight & Life (Madhavika Bajoria, Klaus Kraem-er), UNICEF Headquarters (Nita Dalmiya, Nona Reuter), and UNICEF Bangladesh (Mayang Sari).



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Introduction

Malnutrition among women of reproductive age is a significant public health problem in Bangladesh, with major implications for maternal nutrition and fetal growth outcomes. Poor-quality diets, sub-optimal caring practices, and differential access to antenatal care among vulnerable sub-populations during pregnancy comprise some of the main drivers of malnutrition in this setting. A growing body of evidence has found that multiple micronutrient supplementation (MMS) may be a more cost-effective modality with the potential to enhance health outcomes for pregnant women, above and beyond those afforded by iron-folic acid (IFA) supplementation.

Improving maternal nutrition is a priority under the 2nd National Plan of Action for Nutrition and the National Nutrition Services Operational Plan. The Government of Bangladesh (GoB), in its current policy, has emphasized dietary counselling, iron-folic acid supplementation, institutional delivery, and improving the quality of antenatal care (ANC) services at health facilities. In a view to strengthen maternal nutrition services, including the use of prenatal multiple micronutrient supplements through public health ANC platform in Bangladesh, a demonstration program will be implemented in two districts of Bangladesh. UNICEF and the Bill and Melinda Gates Foundation have partnered with several different organizations, including the Government of Bangladesh, Sight & Life, Pennsylvania State University, and International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b) to conduct a formative research with the overall objective of developing improved ANC services with expanded coverage and provision of MMS.

Methods

Study design. This formative research was designed to have two iterative phases using a combination of qualitative, participatory, and ethnographic methods. The methodological approach drew from Rapid Assessment Procedures for ensuring rigorous and systematic data collection in a programmatic context.

Data collection and sampling. Data were collected in Bhola and Kurigram districts of Bangladesh from October 2020–March 2021. Phase 1 methods were used to generate community inputs for tailoring ANC services and MMS promotions. Those methods included 6 focus group discussions, 6 participatory workshops, and 51 market observations. Phase 2 methods were designed to explore the socio-cultural context of health and nutrition behaviors in this context, with an emphasis on elucidating the multi-level factors driving behaviors of pregnant women. Those data collection methods included 55 free lists and 36 qualitative interviews among pregnant women and health care providers across districts.

Data analysis. Textual data from focus group discussions and interviews were analyzed thematically to identify emergent themes relevant to the guiding research questions. Numerical data from community workshops and market observations were analyzed using simple descriptive statistics. Free list data were analyzed using cultural domain analysis procedures. Findings across all methods were synthesized using a social marketing framework.

Understanding typical diets and care-seeking practices

Pregnant women across Bhola and Kurigram explained the importance of more nutritious diets during pregnancy for the health of both mother and baby, although pregnancy side effects, food rules, and perceptions of large baby sizes also influence their dietary choices. Women's diets during pregnancy in Bhola and Kurigram were very similar: the most commonly consumed foods were rice, dal (lentils), vegetables, and to a much lesser extent, animal sources. Red spinach, taro leaves (kochushak), and pomegranate are examples of culturally prescribed foods during pregnancy, whereas duck eggs, mirka fish, and papaya were examples of food proscriptions (taboos) in Bhola and Kurigram. Promoting MMS in this setting should align with cultural food rules during pregnancy with consideration to the corresponding reasons for appropriate promotions aimed at enhancing acceptability and compliance.

Factors influencing maternal health and nutrition during pregnancy

Data from community workshops, focus group discussions, interviews, and market observations were synthesized to understand the range of factors influencing maternal health and nutrition during pregnancy in Bhola and Kurigram. The factors were organized into several behavioral levels of influence. At the **community level**, cultural food rules, misconception of iron supplements during pregnancy, financial constraints, and competing livelihood demands influence the ability of pregnant women to access ANC services and consume optimal diets. At the **institutional level**, we found that pregnant women face challenges accessing ANC facilities due to far distances and cost. Additionally, the lack of female health workers and frequent stock outs were said to influence decisions to seek care. In this setting, close family members (in-laws, husbands, and grandmothers) and community health workers are examples of important **interpersonal level** influences on maternal health and nutrition behaviors. **Individual-level** differences among pregnant women around illness risk perception, health status, and personal attitudes further explain the differential levels of maternal health and nutrition behaviors in this setting.

Social marketing MMS

Findings were organized to reflect consumer preferences around MMS using a social marketing framework with consideration of the "4 Ps": product, price, placement, and promotions.

Product-related findings. Brand name options for MMS were generated in participatory workshops and include suggestions including, 'Mayer vitamin' (mother's vitamin), 'Ma Vit' (mom's vit), and 'Ma O Shishu Vitamin' (Mother and Child vitamin). Additionally, pregnant women suggested various slogans that could be used to promote MMS, such as Gorvobotimayer vitamin, Khete hobeprotidin (Pregnant mothers must eat vitamins everyday), among others, for MMS packaging or promotional materials. Logo suggestions included images of a 'Smiling image of a mother and child,' as well as, 'A child in a mother's lap.' A pink and white MMS box design was most the preferred color scheme in Bhola and Kurigram.

Price-related findings. Pregnant women in both districts explained the cost of prenatal supplements as a common barrier to accessing them. Top-selling vitamin supplements in the markets of Bhola and Kurigram include Momvit, Aristo Mom, and Nutrum PN-Gold. Many women prefer to get prenatal supplements from community clinics and other government facilities that offer free services; however, drug and supplement stock outs are common. Thus, we found some willingness to pay for prenatal supplements among pregnant women although the majority of study participants suggested MMS to be provided free of charge for enhanced coverage, especially among more vulnerable households.

Placement-related findings. In Bhola and Kurigram, distributing MMS through a combination of facility-based and community-based approaches has the most potential for reaching the most vulnerable households equitably with improved coverage. The pregnant women we spoke to during this formative study largely agreed that MMS should be distributed free of charge through antenatal care services at community clinics, family welfare centers, and other government clinics. Participants across data collection methods also emphasized the benefits of distributing MMS with the help of NGO community health workers during home visit, given the many challenges pregnant women may face while reliably accessing antenatal care services in this setting.

Promotions-related findings. Promoting MMS to pregnant women should consider the secondary audience segments who most directly influence their health and nutrition behaviors, including health workers (community clinic staff, NGO community health workers, doctors) and close family members (mothers-in-law, mothers of pregnant women). In Bhola and Kurigram, tertiary audience segments who are important influencers that indirectly affect the health and nutrition behaviors of community members, including husbands who are heads of households and elected officials (e.g. Chairman of Union Parishad) should also be considering during social and behavior change communications.

Pregnant women in this study suggested a combination of different interpersonal, social mobilization, and media-based communication channels to reach them and their influencers. Mothers and health workers explained that one of the best ways to promote MMS is by using interpersonal communications that include community clinic staff, community health workers, and close family members. At the community level, social mobilization activities promoting MMS should be used in the form of community meetings where doctors and other influencers attend. Finally, billboards, radio, and TV were mentioned as preferred media-based approaches to pass tailored MMS messages.

Conclusion

In the context of COVID-19, this formative study was made successful through a strong collaboration of institutional partners both internationally and domestically in Bangladesh. Our study findings reflect women's preferences that should be considered while designing tailored social and behavioral strategies to increase coverage of ANC services and improved MMS acceptability and compliance in Bhola and Kurigram, Bangladesh.

Malnutrition among women of reproductive age is a significant public health problem in Bangladesh, with major implications for a woman's own health and that of her newborn child. The principal drivers for maternal malnutrition in Bangladesh are poor-quality diets, caring practices and access to health care. Findings from an assessment on coverage of basic social services found that just over half (53%) of pregnant women increased their dietary intake during pregnancy and less than half (44%) of pregnant women consumed a balanced diet from five food groups (IMED et al., 2018). The provision of maternal nutrition services through government systems is also inadequate with just 29% of pregnant women attending all 4 ANC visits and 18% of women consuming at least 100 IFA tablets (James et al., 2016). Furthermore, the most recent State of Food Security and Nutrition in Bangladesh Report (2016) found that 66% of women did not consume adequately diversified diets, which is a proxy measure to identify micronutrient deficiencies.

A growing body of evidence has found that multiple micronutrient supplementation (MMS) may result in better health outcomes for undernourished pregnant women (Black et al., 2019). A meta-analysis found that when compared with pregnant women receiving iron folic acid (IFA) supplements, pregnant women who received MMS had a lower risk of still birth, miscarriage, small-for-gestational age (SGA) and LBW (West et al., 2014). These findings were echoed by the JiVitA-3 randomized trial of MMS and IFA in Bangladesh, where MMS resulted in greater reductions in LBW births (West et al., 2014). Moreover, WHO made a context specific recommendation that countries with a high prevalence of nutritional deficiencies may choose to adopt MMS over IFA. However, the health benefits of MMS cannot be harnessed without a properly functioning delivery platform.

A multifaceted approach focusing on improving the quality of ANC, the supply system for these services, engagement with communities, in addition to the adoption of MMS, may yield health and nutrition benefits to women and children in Bangladesh. UNICEF and the Bill and Melinda Gates Foundation have partnered with several different organizations, including the Government of Bangladesh, Sight & Life, Pennsylvania State University (PSU), and ICDDR,B to collaboratively improve both the coverage and quality of maternal nutrition service delivery through improving ANC services while providing MMS. Importantly, MMS is novel for women in this setting and thus careful introduction is needed for improving supplement acceptability and compliance, without which improving maternal nutrition may remain a challenge. Introducing MMS in this setting therefore necessitated a formative research phase to inform programming and service delivery, the results of which are presented in this report.

Study setting

This formative research was conducted in Bhola and Kurigram districts of Bangladesh. Bhola is located in the Barisal Division while Kurigram is situated in the Rangpur Division. The two districts are geographically a far distance from one another: Kurigram is north-central while Bhola is south central Bangladesh (**Figure 1**).

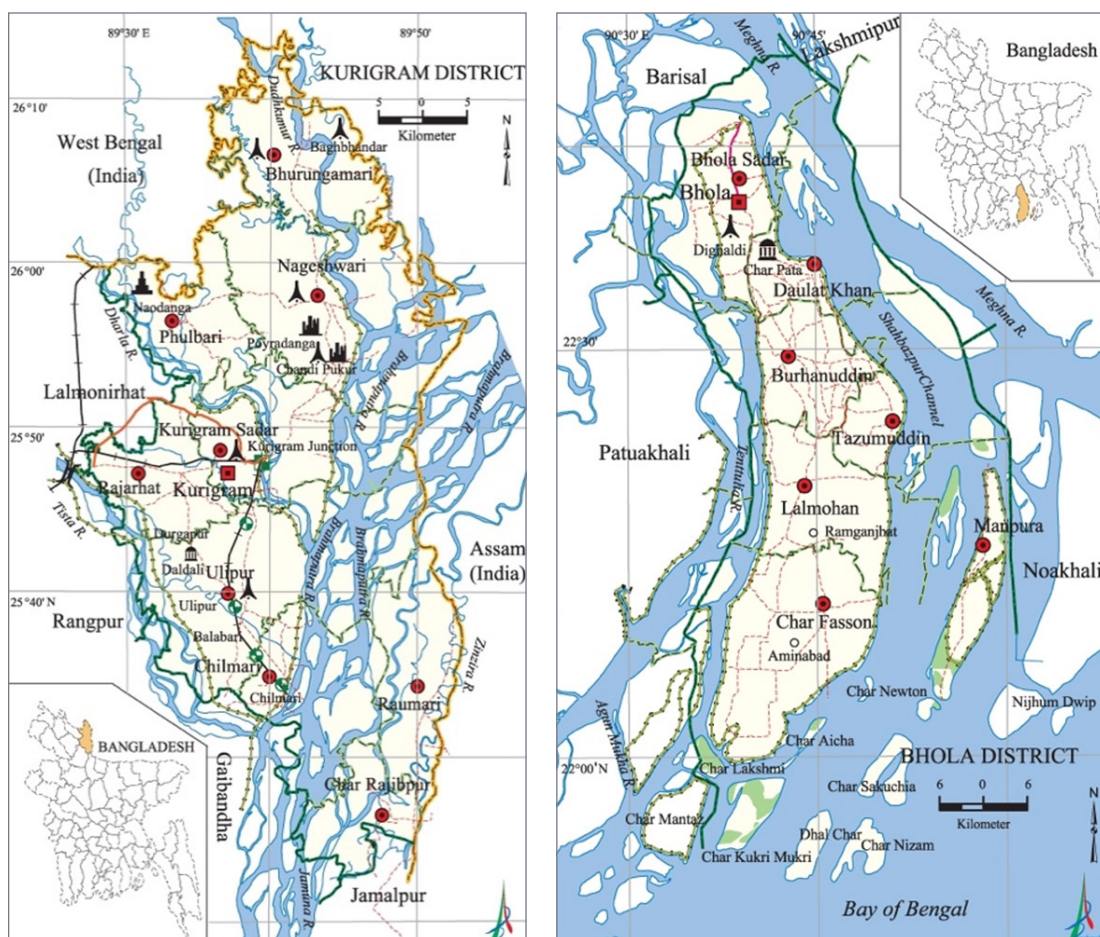


Figure 1 Kurigram and Bhola districts in Bangladesh

Bhola (3737 sq km) is geographically larger than Kurigram (2296 sq km) and both rural districts include populations engaged primarily in agrarian livelihoods. While Bangla is the spoken language among most community members living in these districts the literacy rates in both Bhola (37%) and Kurigram (33%) are low (NIPOORT et al., 2016).

Study design

This research was conducted over two iterative phases using a combination of qualitative and ethnographic methods in a Focused Ethnographic Study approach (Pelto, 2020). This study design is based on previous formative research conducted in Malawi (SQ-LNS utilization for stunting prevention), Mozambique (SQ-LNS utilization for stunting prevention), and Niger (pre-natal LNS supplementation) where specialized nutritious foods were also being introduced (Kodish et al., 2017).

Phase 1 data collection and sampling

Phase 1 data collection methods included focus group discussions, participatory workshops, and market observations.

Focus group discussions. We conducted focus group discussions ($n = 6$) among 57 pregnant and lactating women living in Bhola and Kurigram districts. They were conducted specifically during phase 1 to 1) build consensus around preferred MMS characteristics for social marketing, and 2) To understand social norms around health- and nutrition-seeking behavior during pregnancy and lactation. In each focus group, 8–10 women were purposively sampled with the help of community leaders and health staff. Efforts were made to sample participants who were similar to one another on characteristics deemed important to ensure open discussions where everyone had an equal voice. Some of those characteristics included similar age range, social status, and cultural group. All discussions were moderated in Bangla and digitally recorded.

Participatory Community Workshops. We conducted a series of participatory community workshops ($n = 6$) among 97 community members including pregnant and lactating women, grandmothers, in-laws, and husbands. These types of workshops allow for brainstorming, voting, and consensus building on selected topics. In this formative study, we specifically utilized the workshops to 1) Identify anticipated barriers to and preferred solutions to help ensure optimal MMS acceptability and utilization in this setting, 2) Gain consumer insights on MMS product characteristics including colors, logos, and slogans, and 3) Build community consensus around preferred promotional strategies for introducing MMS including inputs for culturally appropriate programming. Each workshop was facilitated in Bangla with the help of a moderator, a note-taker, and an observer who recorded field notes reflective of important discussion points. Answers to workshop questions and individual votes were recorded in writing on flip charts.

Market observations. Direct observations of 51 pharmacies/drug stores were conducted in Kurigram ($n = 26$) and Bhola ($n = 25$). Observations are a method used to understand observable phenomena of interest. In this study, we observed formal and informal markets where women reported accessing pre-natal supplements to 1) Understand the range of options where pre-natal supplements are currently being sold/distributed to pregnant women in this setting, and 2) To inform social marketing inputs related to preferred MMS product, price, placement, and promotional characteristics. Markets were identified with the help of healthcare providers, pregnant and lactating women, and other community members. In each union, most drug stores were in proximity to nearby health centers. Each observation included a walk through and discussion with the drug seller about the available prenatal supplements and their characteristics. Each observation was conducted by a trained data collector using a semi-structured observation form that allowed for field notes to be taken.

Phase 2 Data Collection Methods and Sampling

Phase 2 data collection methods included free listing, pile sorting, and semi-structured interviewing.

Free lists. We conducted free lists among 55 women of reproductive age in both Bhola ($n = 30$) and Kurigram ($n = 25$). Free listing is a method from cognitive anthropology that allows for an understanding of a cognitive domain (Hough and Ferraris, 2010). In this formative study, free lists were conducted to 1) Identify local food and illness terms to use in tailored messaging to promote MMS and 2) Elucidate food prescriptions and food proscriptions (i.e. taboos) that may exist during pregnancy. Participants were purposively sampled with the help of community leaders and health workers familiar with the

communities. The first free list question asked participants to list all of the commonly consumed foods in their community. The second question asked participants to list all of the illnesses that women may be at risk of during pregnancy. After listing, interviewers probed for local definitions and explanations of selected foods and illnesses.

Pile sorts. Using free list findings of the most salient foods and illnesses, we conducted pile sorting among 60 women of reproductive age in both Bhola (n = 30) and Kurigram (n = 30). Pile sorting is a data collection method that allows researchers to understand local classification systems (i.e. how cultural groups consider items within a cultural domain to be similar or different from one another) (Bernard and Bernard, 2013). In this study, pile sorts were conducted specifically to 1) Explore local illness and food classification systems; 2) Understand perceived similarities and differences between illnesses and local food groups; and 3) Identify local food and illness terms for tailoring messaging during MMS programming. Participants were purposively sampled to ensure they were women of reproductive age living in one of the two study sites. The most salient food and illness terms from free listing were used to create pile sort cards with the names of those items on them. Then we asked participants to sort the cards based on how similar or different they believed the terms were to one another. Additional structured pile sort questions asked participants to sort items into pre-determined piles based on perceptions of food nutritiousness for pregnant women (e.g. most nutritious; somewhat nutritious; least nutritious) and illness severity (e.g. most severe; moderately severe; less severe).

Semi structured interviews: Qualitative interviews were conducted among pregnant women (n = 24) and healthcare providers (n = 12) using semi-structured interview guides that covered topics related to antenatal care-seeking behaviors, diets during pregnancy, factors influencing optimal maternal nutrition, etc. The guides used in this study are provided in the report appendices. Specifically, these interviews were conducted to 1) Understand the lived experiences of women during pregnancy and lactation in Bhola and Kurigram; 2) To describe the barriers and facilitating factors important for optimal maternal nutrition in this setting; and 3) To generate women's recommendations to inform culturally appropriate MMS programming in Bangladesh. Pregnant women and healthcare providers were purposively sampled from union-based health facilities. The health care providers included Community Health Care Providers working for community clinics. As well as Family Welfare Visitors working for union health and Family Welfare Centers. Interviews were conducted in private either at women's homes or in the health centers depending on each person's preference. All interviews were conducted in Bangla and digitally recorded.

A summary of phase 1 and 2 data collection is provided in the **Table 1** below.

Table 1 MMS phase 1 and 2 sampling by data collection method and district in Bangladesh

Method	Bhola	Kurigram	Total (n)
Phase 1			
Focus group discussions	3	3	6
Participatory workshops	3	3	6
Market observations	25	26	51
Phase 2			
Free lists	30	25	55
Pile sorts	31	29	60
Semi-structured interviews (healthcare providers)	5	7	12
Semi-structured interviews (pregnant women)	12	12	24

Data analysis

Textual data from focus group discussions and semi-structured interviews were first translated from Bangla into English verbatim in Microsoft Word. Second, the English transcripts were thematically analyzed and key topics were extracted into a matrix that allowed for findings across transcripts to be collated and compared (Fairclough, 2013). Third, excerpts from the focus groups and interviews were compared across sites and participants for interpretation. Finally, findings were presented by study aim using quotations, tables, and figures to illustrate salient themes and sub-themes.

Cultural domain data generated by free lists and pile sorts were analyzed using Anthropac software (Analytical Technologies, 1992). Smith's S statistic, which considers both frequency and rank of mention, was calculated for all food and illness terms to identify the most salient terms for use in pile sorting (Smith and Borgatti, 1997). Pile sort items were analyzed using multi-dimensional scaling. Multidimensional scaling maps, which are visual depictions of food and illness categorizations, were produced based on how similar or different participants perceived items to be. Findings are presented in table format for free lists and map format for pile sorts.

Numerical data from community workshops and market observations were analyzed using simple descriptive statistics. Field notes from workshops and observations were reviewed during textual analysis and incorporated during interpretation of findings, which are presented in table format. Textual data, cultural domain data, and numerical data were analyzed separately but interpreted together in a form of analytic triangulation that together provided answers to the guiding research questions from various perspectives.



Understanding typical diets and care-seeking practices during pregnancy in Bangladesh

Aim 1: To describe the typical diets and usual health-seeking practices of pregnant women in this cultural context.

Typical diets during pregnancy in Bhola and Kurigram

Pregnant women across Bhola and Kurigram explained the importance of more nutritious diets during pregnancy for the health of both mother and baby, although pregnancy side effects, food rules, and perceptions of large baby sizes also influence their dietary choices. Women's diets during pregnancy in Bhola and Kurigram were very similar: the most commonly reported foods were rice, dal (lentils), vegetables, fish, milk, fruits, and eggs. Rice is the main staple food consumed in this setting. Women in Kurigram reported that they usually eat rice with vater mar (starch) whereas women in Bhola usually throw away the starch of the cooked rice and eat only the steamed rice. Women in Kurigram explained that rice with starch has more nutritional value and it is very good for a pregnant woman. Vegetables are more regularly consumed than animal sourced foods in both contexts. However, vegetable consumption depends on seasonal availability. Many families in Bhola and Kurigram cultivate their own vegetables in home gardens. **Table 2** below provides a list of consumed foods reported by pregnant women in semi-structured interviews and focus groups.

Table 2 *Typical foods consumed by pregnant women in Bhola and Kurigram, Bangladesh*

Typical foods consumed during pregnancy	Supporting interview quotations
Vegetables <ul style="list-style-type: none"> • Red spinach • Taro leaves • Gourd • Sweet pumpkin • Lady's Fingers (okra) • Carrot • Bean • Radish • Water Spinach • Spinach • Pulse • Potato • Cauliflower • Cabbage 	<p><i>"You have to eat vitamin-rich vegetables."</i> -Bhola, interview, pregnant woman</p> <p><i>"A mother should eat proper vegetables."</i> -Bhola, interview, pregnant woman</p>

Typical foods consumed during pregnancy	Supporting interview quotations
Milk	<i>"We drink milk every day." -Kurigram, focus group, PLW</i>
Fruits <ul style="list-style-type: none"> • Apples • Oranges • Pomegranates 	<i>"We eat all kinds of fruits." -Kurigram, interview, pregnant woman</i> <i>"Mothers eat fruits during pregnancy like apples, oranges, and pomegranate." -Bhola, interview, pregnant woman</i>
Eggs	<i>"Then, [during pregnancy] you think you should eat more milk and eggs." - Bhola, interview, pregnant woman</i>
Fish	<i>"Fish and vegetables should be eaten in large quantities." - Bhola, interview, pregnant woman</i>
Meat	<i>"I try to eat a little better food like fish, eggs, meat [during pregnancy]." -Kurigram, interview, pregnant woman</i>
Rice	<i>"Rice is the only food for us. I cannot afford anything but rice. I eat rice three times a day." -Bhola, focus group, PLW</i>

Data suggest that pregnant women in this setting have knowledge of the role dietary intake may play in the health of both themselves and their developing babies. Many mothers described in interviews that they believe they should be increasing the amount of food they consume although doing so is not easy due to pregnancy-related side effects: most participants described difficulties eating during the first trimester due to nausea and vomiting.

*"Mothers cannot eat any extra food...extra foods cause vomiting for her."
-Bhola, interview, pregnant woman*

Pregnant women also reported that the smell of food during pregnancy makes eating more difficult, with one woman from Bhola explaining that she, "...could not stand the smell of food." Food aversions due to certain smells, nausea, and vomiting during pregnancy, were discussed by most women in this study, despite knowledge that nutritious food consumption is important optimal maternal nutrition and fetal growth and development. Some women indicated that they try to eat more meals every day than they had prior to their pregnancy.

*"I used to eat maybe three times a day, now it seems that I eat four times instead of three... sometimes I eat 5 times."
-Kurigram, interview, pregnant woman*

While eggs and milk are nutritionally prescribed during pregnancy, many mothers were worried that those foods, in addition to increased dietary intake through higher meal frequency, also contribute to large baby sizes which can make deliveries more difficult.

*"I have heard that if a pregnant mother eats extra food during pregnancy, the baby gets bigger. Women suggest eating less...otherwise you will need a Cesarean delivery..."
-Bhola, focus group, PLW*

Many pregnant women have learned more about the importance of dietary changes during pregnancy from doctors and close family members, such as their in-laws.

“Doctors and our parents (father and mother in laws) always insist eating extra food for the well-being of mother and children.” -Bhola, interview, pregnant woman

Food prescriptions. In both districts, interview findings revealed that prescribed foods during pregnancy include vegetables (red spinach, taro leaves), fruits (pomegranates, pulses), eggs, and milk.

“I have changed my food habits after I became pregnant. I am drinking plenty of water now. Vitamins like vegetables and meat should be eaten. I am eating extra food now. Eggs and milk should be eaten more now than in the past.” -Bhola, focus group, PLW

Reasons for certain food prescriptions during pregnancy varied but were largely ascribed to their nutritional benefits.

“I was saying that maybe the baby is built from calcium. We need to eat vegetables, vitamins and these types of other things [during pregnancy].” -Kurigram, focus group, PLW

The range of food prescriptions that were discussed by pregnant women during pregnancy in this study are briefly explained in the table below.

Table 3 Food prescriptions during pregnancy in Bhola and Kurigram, Bangladesh

Name of food prescription	Reason for consumption during pregnancy
Milk	Participants explained that milk as a lot of nutritional value and contributes to the full development and growth of the fetus.
Eggs	Pregnant women explained that eggs help prevent premature births and contribute to the full development and growth of the fetus.
Red spinach	Red spinach is said to produce blood in the mother's body and should be consumed in large quantities during pregnancy.
Taro leaves (kochushak)	Taro leaves are said to produce blood in the mother's body to help prevent iron deficiency during pregnancy.
Pomegranate	Pregnant women explained that pomegranate has high nutritional value and produces blood during pregnancy.
Pulses	Pregnant women explained that pulses should be consume in large quantity during pregnancy to help mothers produce enough breast milk.
Plantains (green banana)	Plantains (green banana) contain a lot of iron which increase blood volume during pregnancy, according to mothers.

Red spinach and taro leaves (kochushak) are two vegetables that participants explained to be specifically important for, “producing blood in the mother's body...” to address iron deficiency pregnancy. Some prescriptions are related to their ability to have productive effects within the body: pomegranate is consumed for blood production whereas pulses are perceived to support breastmilk production. Women in both interviews and focus group discussions emphasized the importance of increased vegetable consumption during pregnancy, a prescribed behavior that is encouraged by close family members such as in-laws and grandmothers who have had previous pregnancy experiences themselves.

“My mother says, my mother-in-law says, and my sister-in-law says that you should eat more vegetables...need to eat more vitamins.” -Bhola, interview, pregnant woman

Food proscriptions (taboos). Most respondents reported avoiding one or more foods during pregnancy based on longstanding food rules. The most common foods to avoid during pregnancy include duck meat, shrimp, duck eggs, certain fruits (pineapple, papaya), and some fish types.

“We should not eat the Mirka fish [locally known as Mrigel fish] because if we eat this fish then the baby rotates like a fish in the womb. It also causes nausea of the pregnant mother”.

-Kurigram, interview, pregnant woman

Many reasons for not consuming certain foods during pregnancy were cited by pregnant women. Some of those reasons were related to maternal nutrition while others were related to fetal health. **Table 4** describes those foods considered taboo for consumption during pregnancy and the cultural reasons for doing so.

Table 4 Food proscriptions during pregnancy in Bhola and Kurigram, Bangladesh

Name of food proscription (taboo)	Cultural explanation for why it should be avoided during pregnancy
Duck eggs	Pregnant women explained that duck eggs should not be consumed during pregnancy, as it may give a bad smell to the newborn.
Duck meat	Participants explained that duck meat should be avoided during pregnancy as it will give infants a voice like that of a duck's quack.
Frozen food	Participants explained that women are discouraged from eating frozen foods during pregnancy, as it may cause the baby to have pneumonia.
Shrimp	Respondents shared that shrimp harms both pregnant women and the fetus, therefore avoided during the entire pregnancy.
Pomfret fish	Pomfret fish is said to be harmful for the mother and the fetus and avoided during pregnancy.
Mirka Fish	Mirka fish is said to make the baby rotate like a fish in the womb and causes nausea during pregnancy.
Pineapple	Pregnant women explained that pineapple is avoided as it may cause miscarriages.
Papaya	The majority of pregnant women reported that they never eat papaya during pregnancy because it may cause miscarriage.
Eggs and milk	While women explained that consuming eggs and milk is important nutritionally, they also said that regular consumption of them will contribute to large baby large size and may require a Cesarean section.

Consumption of duck eggs and meat were said to have two consequences for newborn well being related to their smell and voice, respectively.

“We should not eat duck eggs during pregnancy. If we eat duck eggs during pregnancy, then there will be a bad smell from the newborn baby. So, they are avoided during pregnancy.”

-Kurigram, interview, pregnant woman

“If duck meat is eaten during pregnancy, then the voice of the baby will be like a duck. The mother-in-law discourages pregnant women from eating duck meat during pregnancy.”

-Bhola, interview, pregnant woman

Pregnant women also mentioned that fruits like papaya and pineapple should be avoided during pregnancy, explaining that these fruits may cause miscarriage. Promoting MMS in this setting should align with cultural food rules during pregnancy with consideration to the corresponding reasons for appropriate promotions aimed at enhancing acceptability and compliance.

Usual care-seeking practices among pregnant women in Bhola and Kurigram

There are six types of health services that pregnant women usually access in Bhola and Kurigram, half of which provide free antenatal care to community members (**Table 5**).

Table 5 *Types of health services accessed in Bhola and Kurigram by pregnant women*

Most frequently utilized health services	Cost
Community clinic	Free
Upazila Health Complex (UHC)	Free
Union Health and Family Welfare Center (UH&FWC)	Free
NGO community based healthcare service providers	Not free
Private clinics and hospitals	Not free
Local pharmacy doctor	Not free

Interview and focus group discussions suggest that community clinics are most often accessed for antenatal care services by women in Kurigram because they are more accessible than other health facilities, in terms of both cost and distance. On the other hand, women in Bhola explained that they are more likely to access other types of health facilities, as the cost of services was not as salient of a concern in the sample of women interviewed in that district. In both districts, women explained that accessing health services is sometimes determined less by preference as by physical accessibility: it is not uncommon for weather-related events to wash out roads due to flooding during the rainy season.

Community clinics

The community clinic is a government health facility providing services free of cost for families. Services offered include maternal and neonatal health care services (ANC/PNC), management of childhood illness, reproductive health and family planning services, nutrition education, micronutrient supplements, health education and counseling, screening of chronic non-communicable diseases, and treatment of minor ailments and common diseases. A typical community clinic offers up to 30 different types of medicines free of cost.

Pregnant women reported that they typically access community health clinics for weight measurements, check-ups, medicine/vitamin tablets, and educational sessions. Several women we interviewed were currently taking calcium and iron tablets provided by the clinic. Women did report that one issue with the community clinics is that they often face stock outs of drugs and prenatal supplements. The counseling sessions at community clinics were said to be helpful for teaching women about the importance of nutrition during pregnancy. The community clinics were consistently described as being helpful and providing important antenatal care services free of charge.

“We have a community clinic here...I go to the community clinic once a month...iron and calcium tablets are given, weight is measured, blood pressure is checked...And there are health workers of BRAC who also provide health care services, but they charge for the services.” -Kurigram, interview, pregnant woman

Overall, the services offered at the community clinic are more frequently accessed by pregnant women in Kurigram than in Bhola. Patients who are unable to be treated at a community clinic are referred to the Upazila Health Complex (UHC).

Upazila Health Complex (UHC)

UHC is a government healthcare outpatient facility that is located at the sub-district level. There is one UHC in every sub-district of Bangladesh. UHC provides health and family planning services with more highly skilled health personnel including trained doctors, dental surgeons, pharmacists, laboratory technicians, radiographers, dental technicians, nurses, mechanics, and auxiliary personal. Patients are often referred here from community clinics and family welfare centers when those services fall short of providing the services that a patient may need.

Union Health and Family Welfare Centers (UH&FWC)

Union health and family welfare centers are government-run health facilities located in rural areas of Bangladesh. Services are provided free of cost and include family planning, menstrual regulation, vaccinations, and general maternal health services. Pregnant women can receive weight measurements, blood pressure checks, and vitamin tablets from FWCs as well.

NGO workers

NGO is the largest non-government organization in the world with an extensive cadre of community health workers who provide maternal health and nutrition services to families. Health services are provided at a nominal cost and primarily include health promotion and family planning sessions, as one pregnant woman from Kurigram explained during a focus group discussion, *“Most of the time NGO workers are coming for this (family planning strategy).”* NGO health workers also provide nutrition education, safe delivery considerations, immunizations, and water, sanitation and hygiene support. Pregnant women can also receive ANC, PNC, and safe delivery care from NGO community health workers who sell hygiene products and family planning medications and vitamin supplements, as one focus group participant mentioned in Kurigram, *“We would go to NGO for services. Calcium tablets were given there.”* BRAC community health workers and the services they offer were reported to be a helpful and accessible resource for most pregnant women in both Bhola and Kurigram.

Private clinics and hospitals

Private clinics and hospitals offer paid antenatal care services through Bangladesh and thus are less frequently accessed by pregnant women in this formative study for basic services that are provided at community clinics.

“...in the community clinic they are providing services for general treatments, such as general fever, colds, and others. In the case of critical situations, we always refer patients to the Thana health complex.” -Kurigram, interview, health worker

Hospitals have highly qualified doctors, consultants, and nurses providing a wide range maternal, neonatal, and child health services at these facilities. These hospitals are often located at district and sub-district locations. Most women living in Kurigram reported that they only visit the hospital if it is for serious medical treatment or pregnancy-related complications.

“When a pregnant woman faces complications, then they go to doctors or big hospitals mostly. Only those who can afford [the services] will get medical care.”

-Kurigram, interview, pregnant woman

While private health clinics and hospitals were said to have better stocks of drugs and supplements, those facilities are also much less accessed for usual antenatal care seeking practices.

Local pharmacy doctor (community pharmacist)

Local pharmacy doctors are also commonly referred to as the ‘*village doctor*’ (PolliChikitsak). These individuals usually work within local communities nearby most households. They provide basic treatments and common drugs for community members. Some doctors also provide maternal/child health services with an offering of basic treatments for common illnesses. Many women we talked to during this study explained their reliance on the ‘village doctor’ to buy medicine. Market observations revealed that many types of prenatal supplements are available and sold by these individuals at the community level.



Influencing factors of optimal maternal health and nutrition during pregnancy

Aim 2: To understand the context-specific barriers and facilitating factors affecting optimal maternal health and nutrition during pregnancy in this setting.

Data from community workshops, focus group discussions, interviews, and market observations were synthesized to understand the range of factors influencing maternal health and nutrition during pregnancy in Bhola and Kurigram. The factors were organized into several behavioral levels of influence: community, institutional, interpersonal, and individual levels (**Table 6**).

Table 6 Multi-level factors influencing maternal nutrition during pregnancy

Behavioral level	Summary of influencing factors
Community	<ul style="list-style-type: none">• Cultural food rules• Financial constraints limiting nutritious food access• Competing livelihood demands
Institutional	<ul style="list-style-type: none">• Accessibility of antenatal care services• Staffing at antenatal care services• Prenatal supplement availability
Interpersonal	<ul style="list-style-type: none">• Influence of family members (in-laws, grandmothers, husbands)• Home visits by community health workers
Individual	<ul style="list-style-type: none">• Maternal risk perception toward pregnancy-related illnesses• Physiological effects of pregnancy influence dietary choices• Individual attitudes toward prenatal supplementation

Community factors

Community-level factors that influence health behaviors typically include characteristics of the physical environment, as well as socio-cultural aspects that may shape a community and influence the behaviors of everyone. In addition to **culturally bound food rules** described under aim 1 findings in the previous section, we found **financial constraints** and **competing livelihood demands** to be two important community-wide factors influencing maternal health and nutrition behaviors in Bhola and Kurigram.

Financial constraints limiting nutritious food access

In five of the six participatory workshops conducted in Bhola and Kurigram, limited finances was the number one voted challenge that pregnant women face while trying to optimize their diets during pregnancy. Detailed workshop findings, including the full range of barriers to optimal nutrition and top-voted items, are presented in the appendices of this report (**Appendix A**). During follow-up interviews, participants explained that most women are indeed aware of the most nutritious foods to eat during pregnancy (e.g. animal sources and vegetables with high diversity), but limited finances for most households make it difficult to access them on a regular basis.

“It [eating nutritious food]...is not easy because we cannot afford to buy fish, meat, eggs, milk daily. We eat foods based on our financial situation. So, we eat good food in turns...if I eat fish today, then tomorrow I will eat eggs. This is how we eat foods.”

-Kurigram, interview, pregnant woman

“It gets difficult [economically] to eat rice three times a day, so it is impossible to consume other nutritious foods everyday [too].” -Bhola, interview, pregnant woman

In Kurigram, pregnant women explained that there are “...few employment opportunities from Ashshin to Kartik...” (from September until November) which results in shortages of money for most households in the community. As a coping mechanism, community members may purchase fewer medicines and less nutritious food during those months. Pregnant women’s diets in Bhola and Kurigram depend heavily on traditional staple foods, such as rice, because most families cannot afford to consistently buy nutritious foods, or micronutrient supplements, due to a lack of money. This challenge was salient not only during the workshops and interviews, but also one that emerged during focus group discussions with pregnant and lactating women. In both districts, financial barriers were said to be the major influencer of household decisions around dietary choices during pregnancy.

“Mothers don’t buy medicine when they are healthy and only buy it when they are sick. It is difficult to run a family of 4 to 5 people with one person’s income, so most of the time they do not even get to finish the full course of medicines. They only buy medicines for 10 to 25 days.” -Bhola, focus group, PLW

At the community level, financial barriers were the most common challenge influencing optimal nutrition during pregnancy in Bhola and Kurigram.

Competing livelihood demands

Women in both Bhola and Kurigram also explained that competing household demands make it difficult to seek antenatal care services throughout pregnancy. One woman from a Bhola focus group discussion explained that many women, including herself, “...do not get the time to visit hospitals because of household chores.” In both interviews and focus group discussions, findings revealed that traditional gender roles persist, whereby women are primarily responsible for household chores. Prioritizing household responsibilities often means that accessing antenatal care services and ensuring optimal nutrition are difficult.

“I am now 8 months pregnant...almost at the end of 8 months. I wake up in the morning, clean the dishes, clean the yard, wash the baby and my husband’s clothes...then I have breakfast, sweep the house and yard, take care of the baby...these things have to be done. When my husband comes back [from work], I have to serve lunch, prepare bath water, tidy up everything after eating, clean up, clean the baby, and cook again in the evening. Women [in our community] have responsibilities, whether they are pregnant or not...they have to work.” -Kurigram, interview, pregnant woman

Understanding when competing demands may be greater due to livelihoods dependent on seasons may help to tailor services with expanded coverage during those months when women may have greater difficulty accessing facility-based health and nutrition services.

Institutional factors

Institutional-level factors may be considered those characteristics of health facilities, and other structures within a health system, including quality of care, range of services, and available medical personnel. Institutional factors may be barriers that make care-seeking more difficult or may be facilitators that make it easier to seek care at health facilities. Participants in this formative study explained that the **accessibility of antenatal care services, staffing at antenatal care services, and prenatal supplement avail-**

ability were institutional factors influencing maternal health and nutrition behaviors during pregnancy in Bhola and Kurigram.

Accessibility of antenatal care services

Cost considerations. In both districts, pregnant women explained that they primarily access antenatal care offering free services, including those provided at community clinics, family welfare centers, and the Upazila health complex. Financial constraints in relation to antenatal care-seeking behavior was described in more detail in the previous aim 1 section. Participants in this study explained that most women seek antenatal care at community clinics because those services are the most affordable and accessible for the majority of pregnant women in Bhola and Kurigram.

Physical inaccess. More participants in Kurigram than in Bhola explained physical inaccess to antenatal care services as a challenge that affects their ability to consistently seek care at preferred facilities. Physical access to preferred services is sometimes hampered by a lack of transportation and long distances, even to community clinics, which are more geographically distributed than other types of facilities. One focus group participant in Bhola explained that pregnant women, “...visit community clinics less and less because they face problems coming and going.” Additionally, women explained that sometimes community clinics may not be open during working hours and this unpredictability can be a factor when considering whether to travel for care. Another challenge faced by pregnant women is the poor road conditions during the rainy season. In both districts, pregnant women commented on the physical inaccessibility of health services as a major reason for not seeking health services, especially during the rainy season when, “The road to the community clinic is not good and gets flooded during high tides,” as a pregnant woman from Kurigram explained. Seasonal weather patterns disrupt transportation and contribute to access challenges in both Bhola and Kurigram communities.

Staffing at antenatal care services

Data from multiple methods used in this formative work highlighted the important role and trusted advice offered by both facility-based and community-based health workers in this setting. Health worker responsibilities are numerous, as explained an interview participant from Bhola.

“I provide treatments to general patients, children, and pregnant women, including help with deliveries. Every week, we conduct satellite sessions on Sundays and Wednesdays in the village. We are giving health education to pregnant mothers, checking their blood pressure, checking measurements, and explaining symptoms or risk factors to mothers...such as if a mother’s blood pressure is above 140/90 then we identify her as a risky mother.

-Bhola, interview, health worker

Similarly, a health worker from Kurigram explained, “We counsel the mothers to eat nutritious foods and get enough rest during pregnancy.” Given the intimate roles and responsibilities that health workers play for maternal health and nutrition during pregnancy, we learned that the gender of the health workers providing care sometimes determines the types of services offered during an antenatal care session.

“As there is no female officer (female health worker) here, that’s why we just check their (pregnant women) height and blood pressure [during antenatal checkups].”

-Kurigram, interview, male health worker

Few female health workers relative to the number of pregnant women seeking services was said to also be a barrier for many women wishing to seek antenatal care, particularly at the request or preference of their husbands who are influential decision makers as heads of households.

“Most husbands do not like the idea of ultrasonography and do not like male doctors seeing their wives.” -Bhola, focus group, PLW

Focus group discussion and interview accounts revealed that many husbands prefer for their wives to only receive care from female health workers during pregnancy and childbirth.

Prenatal supplement availability

When women do reach antenatal care services at community clinics, oftentimes there are stock outs of drugs and prenatal supplements.

“Most of the time the clinics cannot provide the supplements and ask us to come back the next day or [they just] give half of what is prescribed. Sometimes the clinics are closed as well.” -Bhola, focus group, PLW

These stock outs serve as an additional factor that women consider when choosing to seek care during pregnancy in Bangladesh. Services providing MMS need to carefully consider the supply chain necessary for consistent availability at community clinics.

Interpersonal factors

Interpersonal-level factors are typically considered those direct and indirect influences that other people have on one's own individual health behavior. In Bangladesh, we learned that pregnant women have limited decision-making autonomy when it comes to their own health and nutrition behaviors. They are greatly influenced by the support and advice offered, or not offered, health workers, husbands, in-laws, and other close family members during this life stage. While financial considerations were discussed as the primary factors influencing the ability of pregnant women to eat diverse diets and access antenatal care services, we also learned about the importance of social networks for facilitating or constraining women's ability to meet their health and nutrition needs in Bhola and Kurigram.

Influence of family members (in-laws, grandmothers, husbands)

In-laws and grandmothers. In-laws of pregnant women play an important role during pregnancy in Bangladesh – one that includes offering direct pregnancy-related advice and guidance which is difficult for pregnant women to ignore without criticisms and disapproval.

“Visiting the clinic makes my mother-in-law angry and she does not allow me to get the checkups. And she says, ‘whatever is God’s will happens’ so I have to obey my mother-in-law.” -Bhola, focus group, PLW

“Most of the time they (pregnant women) do not eat nutritious or extra foods because their mothers-in-law criticize [them] to the neighbors.” -Kurigram, focus group, PLW

Pregnant and lactating women explained that this older generation, which includes grandmothers and in-laws, typically frowns upon supplementation during pregnancy for reasons related to perceptions of larger baby sizes.

“Vitamin supplements make the baby large, for which the baby cannot be delivered normally and will require a C-section. [In-laws say] mothers should eat plenty of vegetables instead of taking iron and calcium.” -Kurigram, focus group, PLW

“Iron supplements will make the babies fat and will need to be delivered through Caesarean section. That is why we are advised not to take vitamin supplements [by in-laws].”

-Bhola, focus group, PLW

And while most data collected during this formative study discussed family members as interpersonal barriers to optimal care and nutrition, some participants discussed their positive influence during pregnancy too.

Husbands. Pregnant women explained that household food access, including that during pregnancy, is directly related to the earning potential of their husbands. As one pregnant women from Kurigram explained, *“Food in the house is according to the amount [of money] my husband earns.”* While extra household support from husbands during pregnancy was not commonly discussed, several participants acknowledged that their husbands do offer extra help around the house during pregnancy, as explained by a focus group participant in Bhola, *“Most of the time my husband is out of the house for work, but whenever he is at home he helps me.”* Similarly, husbands and grandparents, including in-laws, were said to sometimes be supportive by trying to provide pregnant women with special foods when possible.

“Like I said, my mother and father try to bring fish, eggs, meat and all other healthy foods for me... [during pregnancy]” -Bhola, focus group, PLW

Home visits by community health workers

Community health workers are another important interpersonal influencer in Bangladesh, especially at the community level where home visits with NGO community health workers help reach more vulnerable households.

“I get checkups every month since getting pregnant...I did get a checkup from BRAC. Yes, he did [give me] a checkup at home.” -Kurigram, interview, pregnant woman

Community health workers play an important role in Bangladesh by providing services at household level, including antenatal counseling and advice. By all accounts, health worker advice is both appreciated and highly trusted in Bhola and Kurigram.

“Health workers from BRAC visit mothers house to house for checkups. They give advice related to nutritious foods, and also give medicines. BRAC also provides nutrition plates to mothers.” -Kurigram, focus group, PLW

Overall, pregnant women are directly influenced by community health workers and close family members who provide social support in the form of resources, shared responsibilities, and advice during pregnancy. Ensuring these interpersonal influencers are champions of MMS may help to ensure acceptability and compliance among pregnant women.

Individual factors

Individual-level factors are those that vary by person and typically include psycho-social determinants of health and nutrition behaviors such as knowledge, attitudes, self-efficacy. They may also reflect individual health differences including age, gender, and life stage. Individual-level factors are typically a result of community, institutional, and interpersonal influences that synergistically interact upstream to shape these individual perceptions and behaviors. We found **maternal risk perception toward pregnancy-related illnesses, physiological effects of pregnancy, and individual attitudes toward prenatal supplementation** to be three important individual-level factors for consideration when designing and implement-

Maternal risk perception toward pregnancy-related illnesses

Health workers and pregnant women were asked to list all pregnancy related illnesses that came to mind during a free-listing exercise in this formative study. The most salient pregnancy-related illnesses to health

Table 7 *Pregnancy-related illnesses discussed by health workers and pregnant women*

Salient illnesses during pregnancy (health workers)	Salient illnesses during pregnancy (pregnant women)
1. Anemia	1. Vomiting
2. Low blood pressure	2. Lower abdominal pain
3. Edema	3. Back pain
4. Vomiting	4. Acidity
5. Weakness	5. Dizziness
6. Loss of appetite	6. Anemia
7. Lower abdominal pain	7. Edema
8. Nausea	8. Nausea
9. Diarrhea	9. Tingling sensation in legs and arms
10. Acidity	10. White discharge

workers were different from those considered most important to pregnant women, although some overlap between the groups exists (**Table 7**).

Anemia, a micronutrient deficiency, was the most salient illness according to health workers but less so among pregnant women. Health workers explained anemia from a biomedical perspective: it is due to nutritional inadequacies of typical diets and/or low intake of micronutrient supplements during pregnancy.

“People in this area are not eating food properly...that’s why most mothers are suffering from anemia.” -Bhola, interview, health worker

Health workers discussed nutrition-related risks for pregnancy, with top concerns focused on maternal anemia, nutritional edema, low blood pressure, and eclampsia. By contrast, the biggest illness concerns

Table 8 *Perceived severity of illnesses associated with pregnancy by type of respondent*

Most serious illnesses associated with pregnancy (health workers)	Most serious illnesses associated with pregnancy (pregnant women)
1. Malnutrition	1. Lower abdominal pain
2. High blood pressure	2. Back pain
3. Anemia	3. Eclampsia
4. Edema	4. Acidity
5. Low blood pressure	5. Edema
6. Eclampsia	6. Anemia
7. Bleeding	7. Cervical insufficiency
8. Fluid loss	8. High blood pressure
	9. White discharge
	10. Water accumulated in the lower abdomen

of pregnant women were related to nausea/vomiting, as well as physical aches such as lower abdominal pain and back pain. The table below summarizes those illnesses associated with pregnancy in order of their perceived seriousness, comparing perspectives of health workers to those of pregnant women.

Pregnant women in both districts explained that lower abdominal pain, back pain, and eclampsia during pregnancy may lead to poor birth outcomes and serious consequences for maternal and child health.

“Lower abdominal pain, cervical insufficiency, and eclampsia are risky. These complications during pregnancy can kill both the mother and the baby.” -Bhola, interview, pregnant woman

To a lesser extent, pregnant women discussed micronutrient deficiencies, including anemia, as potentially harmful to fetal growth and development. One participant in Kurigram explained severe anemia to be an important risk factor for maternal and infant mortality.

*“Anemia is very harmful for both mother and baby. If a pregnant mother is anemic, then her baby will be anemic too...and anemia during pregnancy can kill both mother and baby.”
-Kurigram, interview, pregnant woman*

Aligning the purpose of MMS for improved maternal nutrition and better birth outcomes with the perceptions of health workers who will be asked to provide the supplement, as well as counsel caregivers, will be important. Ensuring social and behavior change communications are also aligned with the illnesses that caregivers believe are serious to address during pregnancy may also help to improve acceptability and compliance during antenatal care programming where MMS is provided.

Physiological effects of pregnancy influence dietary choices

Study findings emphasized that dietary patterns during pregnancy are shaped by cultural factors (e.g. proscriptions and prescriptions), economic factors (e.g. food access), and individual preferences. Most women we interviewed had knowledge of those foods considered nutritious, but the physiological effects of pregnancy, including nausea/vomiting and changes to taste preferences, affect individual appetites and taste preferences at different times during pregnancy.

*“I cannot eat everything; I have to choose. At the time of three months of my pregnancy, I have a vomiting tendency and I normally eat what I [physically] can eat.”
-Bhola, focus group, PLW*

Physiological changes, including heightened sensitivities or aversions to certain foods and smells, are contributors to the attitudes of pregnant women toward not only foods but also prenatal supplements.

Individual attitudes toward prenatal supplementation

Perceived benefits. Health workers and pregnant women acknowledged the benefits of taking micronutrient supplements, including the consequences that may result from a lack of vitamins, during pregnancy. A pregnant woman in Bhola explained, “...taking vitamins makes my body feel better; otherwise, I feel tired and weak. A lack of vitamins makes [my] hands and feet tremble...” Similarly, a participant in Kurigram stated that, “Iron tablets help increases blood in the body and calcium supplements will help make a baby’s teeth and bones strong.” Knowledge of the benefits of prenatal supplementation was generally high among all study participants who discussed anemia prevention, improved maternal immunity, better fetal growth, and reduced maternal pain and weakness when asked about supplementation. **Table 9** below describes the benefits of supplementation as explained by pregnant women during interviews and focus group discussions.

Table 9 Perceived health and nutrition benefits of MMS or similar prenatal supplements

Reported benefits of supplementation during pregnancy	Supporting quotations
Iron increases blood supply/ cures anemia	<p><i>"Taking iron tablets increases the amount of blood [in a mother's body]."</i> -Kurigram, focus group, PLW</p> <p><i>"Iron eliminates blood deficiency in the body."</i> -Kurigram, interview, pregnant woman</p>
Improves mother's immunity	<p><i>"Taking vitamins builds immunity in a mother's body."</i> -Bhola, interview, pregnant woman</p> <p><i>"If we take vitamins, it improves our immunity."</i> -Kurigram, interview, pregnant woman</p>
Calcium can improve baby's bone strength and promote growth	<p><i>"If I take calcium and iron tablets then my baby will be healthy and their bones will be strong."</i> -Kurigram, interview, pregnant woman</p>
Helps with mother's body pain/ weakness	<p><i>"The benefits of taking these medicines are that there is no pain in the hands and feet."</i> -Kurigram, interview, pregnant woman</p> <p><i>"If I take calcium with iron then my physical weakness disappears."</i> -Bhola, focus group, PLW</p>

Reported barriers. Attitudes toward supplementation were not always positive but did vary by individual participant. In both Bhola and Kurigram, the barriers associated with prenatal supplementation ranged from its cost, availability, and negative side effects. The table below describes the top mentioned challenges associated with prenatal supplementation based on the previous experiences of women with iron and calcium tablets, as well as what they have heard about supplements from other mothers, family members, and health workers.

Table 10 Reported barriers to prenatal supplementation in Bhola and Kurigram

Reported barriers of supplementation during pregnancy	Supporting quotations
High cost of supplements	<p><i>"Of course, vitamins are required but we can't afford the vitamins."</i> -Bhola, interview, pregnant woman</p>
Supplement odor/smell	<p><i>"Many people do not like the vitamins that are available in the clinic; the medicine has a mild odor, which is why many people do not want to eat [them]."</i> -Bhola, interview, pregnant woman</p> <p><i>"Yes, it's smelly (iron). Iron and calcium cannot be taken due to their smell."</i> -Bhola, focus group, PLW</p>
Physiological side effects of supplements	<p><i>"Many [women] say that they cannot take iron because it causes constipation. Though their body needs vitamins, they [pregnant women] cannot take such vitamins due to these problems."</i> -Bhola, interview, health worker</p>
Perception that supplements can cause delivery complications	<p><i>"Vitamin supplements make the baby large, for which babies cannot be delivered normally and require a C- section."</i> -Bhola, focus group, PLW</p>
Limited access to supplements due to poor road conditions and stock outs	<p><i>"The road to the clinic is not good and gets flooded during high tide."</i> -Bhola, focus group, PLW</p> <p><i>"Medicines are not available in the clinics most of the time."</i> -Kurigram, focus group, PLW</p>

Pregnant women typically access community clinics in Bhola and Kurigram for calcium and iron supplements but oftentimes face stock outs. In cases when supplements are unavailable at community clinics, women who have enough money may go to pharmacies to buy them, but we heard that doing so is not commonplace among women in our sample. Further, some women prefer locally available diets based on whole foods consumption, with a focus on increased vegetable intake during pregnancy. We heard women explain that consuming vegetables in greater quantity during pregnancy would be sufficient for meeting nutrient needs, while also allowing them to avoid prenatal supplements which can sometimes have a certain medicinal smell contributing to more nausea and vomiting, especially in early pregnancy. The previous experiences of pregnant women with other prenatal supplements in both districts will be contributing factors to perceptions of MMS when it is introduced in Bhola and Kurigram.



Developing social marketing inputs for MMS programming

Aim 3: To generate social marketing-related recommendations (product, price, promotion, placement) for improving the likelihood of MMS acceptability and compliance among pregnant women.

This section outlines findings reflective of consumer preferences to inform a social marketing approach to promote MMS with consideration of the “4 Ps”: product, price, placement, and promotion. To do so, we utilized data from participatory workshops, market observations, and interviews to firstly understand the characteristics of current prenatal supplements available to pregnant women in Bhola and Kurigram, and secondly to identify appropriate audience segments, communication channels, and Bengali phrases for tailoring messaging to promote MMS.

Product-related findings

To determine the most appropriate packaging for MMS supplementation, pregnant and lactating women participated in qualitative interviews, focus group discussions, and participatory workshops where they brainstormed and voted on their preferred MMS characteristics, including color scheme, logo, slogan, and brand name options. Incorporating consumer preferences into services providing MMS may help to improve acceptability and compliance throughout pregnancy.

MMS brand name options

Participants in both Bhola and Kurigram explained the importance of developing an appropriate name for MMS by using a combination of similar local terms across districts.

Table 11 Preferred MMS brand name options from participatory workshop voting

District	MMS brand name options	Votes
Kurigram	Mayer vitamin (Mother's vitamin)	38
	Ma vit (Mom's vit)	37
	Ma O Shishu Vitamin (Mom and child vitamin)	33
	Gorvobotimayer vitamin (Pregnant mother's vitamin)	25
	Baby Vit (Baby Vit)	23
Bhola	Ma vit (Mom's Vit)	29
	Ma O Shishu Vitamin (Mother and child vitamin)	27
	Ma O Shishu'r Pusti (Mother and child's Nutrient)	25
	Mayer vitamin (Mother's Vitamin)	18

The names “*Mayer vitamin*” (Mother’s vitamin), “*Ma vit*” (Mom’s vit), “*Ma O Shishu Vitamin*” (Mother and child vitamin) were independently brainstormed and voted to be top name options in both Bhola and Kurigram. According to participants, these MMS name options were selected because they reflect the intended beneficiaries of the supplement.

“If mother and child are not reminded to take nutritious food, they might forget. They need to know that this medicine is for the child, mother, or pregnant women.”

-Kurigram, focus group, PLW

Workshop participants explained that because MMS has benefits also for the developing baby, suggested names such as “*Baby Vit*” may nicely emphasize such benefits. Respondents explained that any chosen name should reflect the full purpose of MMS.

“By [suggesting this] this name, we say that if this vitamin is taken by mother, then both mother and child will be healthy.” *-Bhola, focus group, PLW*

Women in Bhola and Kurigram explained that using local names in Bengali to brand and promote MMS will be more recognizable and attractive to prospective consumers than just referring to the product by its English acronym.

Slogans to promote MMS

In Bhola and Kurigram, pregnant and lactating women discussed the importance of using a locally-developed slogan to communicate the importance of MMS for maternal and child health and nutrition. The top preferred slogans to consider using while promoting MMS in social marketing materials are presented in the table below.

Table 12 Summary of the preferred MMS slogans based on participatory workshop findings

District	Slogan	Votes
Kurigram	<i>Gorvobotimayer vitamin, Khetehobeprotidin</i> (Pregnant mothers must eat vitamins every day)	47
	<i>Ma oshudhkhele pore, ma o sishususthothake</i> (Mother-child will stay healthy, mother’s vitamins will be by their side)	44
	<i>Ma k pustikhaoai, ma o sishu k susthorakhi</i> (Feed mother nutrients, keep mother-child well)	26
Bhola	<i>Ma khele vitamin, bacchathakbesuthoprotidin</i> (If the mother takes vitamins, the child will stay healthy every day)	48
	<i>Ma jodikhai vitamin, bacchasusthothakbeprotidin</i> (If the mother takes vitamins, body will remain healthy every day)	29
	<i>Khelepusti ma, bacchathaklovalo</i> (If the mother eats vitamins, the child will get nutrition every day)	26

In both Bhola and Kurigram, the majority of participants proposed slogans that are related to mother and child health: “*Ma oshudhkhele pore, ma o sishususthothake*” (Mother-child will stay healthy, mother’s Vitamin will be by their side), “*Ma k pustikhaoai, ma o sishu k susthorakhi*” (feed mother nutrient, keep mother-child well). In addition, the most popular slogans in Bhola pertain to the nutrition and health of the infant: “*Khelepusti ma, bacchathaklovalo*” (If the mother takes vitamin, the child will get nutrition every day), “*Ma khele vitamin, Bacchathakbesuthoprotidin*” (If the mother takes vitamin, the child will stay healthy every day). Participants also proposed slogans that can be used to sensitize other women to take the supplements: “*Gorvobotimayer vitamin, Khetehobeprotidin*” (Pregnant mothers must take vitamins every day), “*Ma jodikhai vitamin, bacchasusthothakbeprotidin*” (If the mother takes vitamin, body will remain healthy every day).

MMS logo suggestions

Most women identified suggested MMS logos that depict the intended consumers of the supplement: mother and infant. Findings from participatory workshops in Bhola and Kurigram are presented below.

Table 13 Summary of the preferred MMS logo depictions based on participatory workshop findings

District	Logo options	Explanatory quotations	Votes
Kurigram	A child in mother’s lap	<i>“Image of a smiling mother and smiling baby looks good...a smiling mother holding the child up high also looks good.”</i>	57
	Smiling image of mother and child		40
	A smiling mother kissing her child	<i>“The picture of a pregnant women on one side of the page and a picture of the child’s mother on the other side, since the medicine is for both. The mother and child will both have a little smile so that it is understood that they are happy after taking the medicine.”</i>	26
	The mother holding the child up high		21
Bhola	Smiling mother holding child up high	<i>“Use an image of woman and baby but do not use image of a pregnant woman.”</i>	35
	Lactating mother feeding her child with a pregnant mother by her side, with an infant aged 1–2 months	<i>“The belly of the pregnant woman should be understood from the picture. The supplements will be beneficial for the mothers as they will get nutrition and be healthy.”</i>	26
	Photo of a pregnant mother with a food tray in front of her		25

Participants explained that the best logo for MMS packaging should be easy to identify by everyone and reflect positive feelings (i.e. positive affect) using depictions of smiling images. Some disagreement emerged in relation to whether a pregnant woman’s belly should be made explicit in a logo. Some participants indicated that such an image might be somehow embarrassing in this cultural context.

Preferred colors for MMS packaging

During interviews and participatory workshops, participants suggested colors that they would like to see associated with MMS materials, including box design and other promotional materials.

Table 14 *Summary of the preferred colors for MMS packaging and promotional materials*




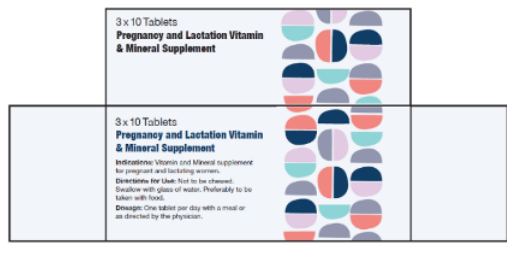
District	Packaging color	Votes
Kurigram	Green	39
	White	33
	Purple	25
Bhola	White	39
	Purple	27
	Red and green	25

When participants were provided samples of MMS box designs to choose as their most preferred, they selected a design with white and pink color combination in both Bhola and Kurigram. Pregnant women explained, “...pink is attractive, and the picture gives a clear meaning of MMS importance for both mother and baby.” Respondents in both districts discussed certain characteristics that would be less desirable, including the use of black colors, celebrity images, and pregnant bellies that might make consumers feel embarrassed. Although the pink and white box design with mother and baby outlines was most preferred in Bangladesh, participants seemed to prefer actual pictures to cartoon depictions if given the choice.

“[I] do not like pictures of celebrities. An actual picture of a mother and baby [is preferred] ... should not be a cartoon image.” -Bhola, focus group, PLW

The MMS box design options presented to participants are presented in the table below based on their rank order preference.

Table 15 MMS box design options in order of preference based on workshop voting in Bhola and Kurigram

Rank order based on workshop voting	MMS box design options
1. Most preferred	
2. More preferred	
3. Less preferred	
4. Least preferred	

Price-related findings

Prices of comparative prenatal supplements in the market

Market observation data revealed that the current price of prenatal supplements, on average, ranged from 3.00 to 6.00 Taka (0.03-0.07 USD) for a single pill. The table below describes these prices, per pill, of available vitamins for sale in Bangladesh based on market observations in Bhola and Kurigram districts.

Table 16 Average price per pill of prenatal supplements based on market observation data

Supplement	Average price per pill (BDT*)
Momvit	3.02 (0.04 USD)
Aristo Mom	3.00 (0.03 USD)
Nutrum PN-Gold	6.00 (0.07 USD)
Precare	5.00 (0.06 USD)
Multivit Plus	2.00 (0.02 USD)
Natal-16	3.00 (0.03 USD)

*BDT = Bangladeshi Taka

Pregnant women explained in both the focus group discussions and interviews that the cost of prenatal supplements was a common barrier to accessing them.

Willingness to pay for MMS

We collected data around women's willingness to pay for MMS and found the suggested price for a 30-day supply of MMS ranged from 50 to 300 Taka (0.06-3.50 USD). In other words, some women suggested that they might be willing to pay for a 30-day supply of MMS.

“Suppose, if the price is one hundred and fifty Taka, then no one will be able to buy it but if the price is thirty Taka or maximum fifty Taka then many women will be able to buy it”

-Bhola, interview, pregnant woman

Health workers had more modest suggestions when asked about the possibility of community members being able to pay for MMS, indicating affordable pricing would be just 2.0 Taka/pill.

“It will remain within their buying capacity if there are ten vitamin capsules per package. But if the price is more than ninety Taka, then they will not be able to buy the vitamins because purchasing capacity is not the same for everyone. If one capsule is just two Taka then it is possible to buy ten capsules for twenty Taka.” -Bhola, interview, health worker

In most cases, pregnant women and health workers who participated in this formative study suggested that MMS should be free of charge if high coverage is important. A focus group participant in Kurigram conveyed the opinion of most participants by saying, “If we get it (MMS) for free of cost, then it's good.” Participants emphasized the importance of finances for making health and nutrition related decisions, indicating that the current prices of available prenatal supplements on the market in Bangladesh are too expensive for most women in Bhola and Kurigram, and thus MMS should be provided for free.

Placement-related findings

In Bhola and Kurigram, distributing (i.e. ‘placing’) MMS through a combination of facility-based and community-based approaches seems to have the most potential for reaching the most vulnerable households equitably with higher coverage than only using one type of distribution strategy.

Provision of MMS in community clinics. The pregnant women we spoke to during this formative study largely agreed that for high coverage, MMS should be distributed through antenatal care services offered free of charge at community clinics, family welfare centers, and other government clinics.

“If it [MMS] is provided through community clinics, then we can also get it easily. But if it is provided in other places, for example health facilities far from the community, then women will not go there to get [MMS] and women will also not know where to get it.”

-Bhola, interview, pregnant woman

“If these vitamins are available at family welfare centers, then it will be good for mothers.”

-Kurigram, interview, pregnant woman

One issue that was raised during workshops and interviews was related to frequent drug and supplement stock outs at community clinics. Participants explained that community clinics and family welfare centers tend to run out of vitamin supplement stocks frequently. In many cases, pregnant and lactating women reported going to clinics to receive vitamins, and only after arriving are told to return another day because the clinic had run out of the supplement or product for which they traveled.

“Most of the time the [community] clinics cannot provide the supplements [when we need them] and [the clinics] ask us to come back the next day or they give [women] half of what is prescribed. Sometimes the clinics are closed as well [upon arriving].” -Bhola, focus group, PLW

Equipping community health workers to provide MMS during home visits. To help improve access to MMS, participants across data collection methods emphasized the benefits of supplement provision by community health workers who conduct home visits—an approach that participants explained would distribute MMS more equitably and allow for easier access among pregnant women who oftentimes faces challenges accessing antenatal care services.

“It would be easy to get this vitamin [MMS]...if it is given during home visits by the frontline healthcare providers, [then] it would be very easy.” -Bhola, interview, pregnant woman

Since the community health workers are typically members of the local communities, themselves, they are already well known and trusted health providers. Using this community-based approach as one strategy for MMS distribution may improve the likelihood of improved program coverage with better acceptability and compliance, given the opportunity that health workers will have to promote MMS to eligible women on a regular basis.

Pharmacies and shops. Market observations revealed examples of prenatal supplements that are sold at pharmacies and shops in Bhola and Kurigram. The supplements we identified at shops and in pharmacies were most often displayed in front of other products with medium to high visibility, on store shelves organized by company name, or displayed with other multivitamin supplements wherever those products were being sold. Participants explained that most women are aware that they can access prenatal supplements at these facilities, but their cost is a barrier to access for most people.

“If it [MMS] is given only through private means, then pregnant mothers may have to buy it from the market...some may know about such vitamins, some may not know...pregnant mothers should easily [be able to] get the vitamins if they go to a community clinic.”

-Kurigram, interview, pregnant woman

Distributing MMS through only private channels may restrict access for pregnant women, the majority of whom may not be able to afford it.

Promotion-related findings

It requires an understanding of the preferred communication channels to reach MMS consumers through multiple approaches including media, interpersonal, and social mobilization strategies. Finally, it requires tailored messaging that resonates with end users with understandable and non-technical language. Considerations around audience segments, communication channels, and tailored messaging are described in the sub-sections below.

Audience segments

Promoting MMS for high acceptability and sustained compliance may benefit from a tailored approach that understands the primary, secondary, and tertiary audience segments through which to target communications.

Primary audience segment. The primary audience segment of a behavior change strategy is the person or persons whose behavior the program aims to change. In the case of this project, pregnant women living in Bhola and Kurigram are the primary audience segment. We aim to use appropriate social marketing (i.e. social and behavior change communications) to complement the improved antenatal care services for high MMS acceptability and compliance among pregnant women. To do so, social and behavior change strategies should tailor approaches and messaging in consideration of the characteristics of the archetypical pregnant woman in this setting (**Figure 2**).



Archetypical pregnant woman in Bhola and Kurigram

Age range: 18–30 years old

Livelihood: Housewife, mother

Family: Husband, 2–3 children, mother-in-law

Location: Bangladesh (Bhola and Kurigram)

Language: Bengali/Bangla

Typical diet during pregnancy

- Typical diets rely primarily on rice as the staple food in every meal
- Animal sources are consumed to a much lesser extent, even during pregnancy
- Supplementation during pregnancy is common in this setting; most women have previous experiences with it
- Generally good knowledge of nutritious diets during pregnancy, but limited finances remain a challenge to consuming them
- Some food prescriptions and food proscriptions exist in this setting and may influence dietary intake

Current care seeking practices

- Community clinics are the most accessed type of facilities utilized for pregnancy services because of their location and affordability
- Private clinics access is much more limited in Bhola and Kurigram
- Hospitals are only visited for medical complications
- BRAC community health workers provide home visits and are trusted members of the health system

Previous experiences with prenatal supplements

- Likely has previous experiences taking iron-folic acid or calcium tablets
- Supplements are sometimes purchased but mostly gotten for free at clinics
- Current placement of prenatal supplements is at pharmacies and community clinics, but stock outs are frequent
- Primary purchasers of prenatal supplements are husbands

Likely barriers to MMS acceptability and compliance

- Limited finances to access services where MMS may be provided is a likely barrier
- Pregnant women's health and nutrition decisions are influenced by family members, including in-laws who may not support supplementation approaches
- Frequent stock outs of prenatal supplement at community clinics
- Persistent perceptions that prenatal supplements yield large babies and result in Cesarean sections
- Low risk perception toward illnesses during pregnancy may hamper MMS compliance

Trusted communication channels to reach pregnant women

Interpersonal channels

- Community clinic health staff (CHCP, FWA, HA)
- BRAC community workers
- Doctors

Social mobilization

- Community meetings

Media

- Billboards
- Radio
- Print (brochures, job aides)
- Television advertisements

Examples of salient Bangla phrases to use in MMS promotions

"Ma k pusti khaoai, ma o sishu k sustho rakhi"
(feed mother nutrients, keep mother-child well)

"Ma khele vitamin, Baccha thakbe sustho protidin"
(If the mother takes vitamins, the child will stay healthy every day)

"Ma jodi khai vitamin, baccha sustho thakbe protidin"
(If the mother takes vitamins, her body will remain healthy every day)

Figure 2 Characteristics of a typical pregnant woman and associated MMS considerations based on formative research in Bhola and Kurigram

Secondary audience segments. A secondary audience segment is a person who has directly influence on the person whose behavior the program or intervention wishes to change. We sought to identify the direct influencers of pregnant women during this formative study for a tailored social and behavior change approach. Messaging directly to the primary audience segment may not be as effective as also messaging to secondary audience segments who may frequently talk to pregnant women and reinforce those same messages around MMS for acceptability and compliance.

Secondary audience segments who directly influence maternal health and nutrition behaviors

Health workers

- Community clinic staff
- BRAC community health workers
- Doctors

Close family members

- Mothers-in-law
- Mothers of pregnant women

Health workers

Health workers in Bhola and Kurigram are direct influencers who offer trusted health and nutrition advice to pregnant women in both districts of Bangladesh. Typical advice from health workers includes that around optimal health behaviors, maternal nutrition, and strategies for ensuring adequate rest during pregnancy.

“When mothers come here at first, we provide nutrition advice to them. We counsel the mothers to eat nutritious food and get enough rest during pregnancy.”

-Bhola, interview, health worker

Both facility-based and community-based health workers are trusted sources of information in Bhola and Kurigram.

“Mothers listen to family planning programs and community health workers. It [MMS] can be marketed through them.” -Bhola, focus group, PLW

Promoting MMS to eligible women through facility- and community-based health workers should include adequate trainings and support needed for clear and consistent messaging. Planning for and investing in adequate health worker trainings, re-trainings, and job aides so that health workers have the self-efficacy needed to promote MMS to pregnant women in this setting will be important for behavioral uptake and compliance.

Close family members

Mothers-in-law and mothers of pregnant women are additional secondary audience segments that should be considered during a social and behavior change strategy. This formative work revealed the importance and power of these family members’ opinions to directly influence—positively and negatively—the health and nutrition behaviors of pregnant women in both Bhola and Kurigram.

“They [mothers-in-law] should be informed because some in laws force them to not have nutritious foods.” -Kurigram, focus group, PLW

A strong social and behavior change communication strategy will work to actively engage individuals such as in-laws; otherwise, these important influencers may be barriers to optimal MMS acceptability and compliance in the future.

Tertiary audience segments. Typically, tertiary audience segments include individuals who indirectly influence behaviors of the primary audience segments. This influence is most often felt through the secondary audience segments but can also be at the community level more generally. An example may be a community leader who may not directly give dietary advice to pregnant women, but who may lead community meetings where health workers are introduced and supported in their discussions promoting an MMS-like product to eligible community members.

Tertiary audience segments who indirectly influence maternal health and nutrition behaviors

Husbands

Community leaders

- Elected leaders
- Traditional leaders (e.g. village elders)

Neighbors

Husbands

We found that pregnant women in Bhola and Kurigram are also indirectly influenced by their husbands and other influential community members. Although it may seem that husbands have a very direct influence on the health or nutrition behaviors of pregnant women, we heard that husbands are often working long hours and involved primarily while making household-level decisions such as finances. Therefore, husbands may be considered a tertiary audience segment and community-level promotions of MMS may strategically target them using community-level media such as billboards.

“If there is such a big billboard in front of the clinic or in front of a shop, then the husbands of pregnant mothers may read the billboard and go home and share it [MMS information] with their wives.” -Bhola, interview, pregnant woman

Two thirds of interviews with shop keepers and pharmacists during market observations explained that husbands are the primary purchasers of prenatal supplements intended for pregnant women. Behavioral prompts at point of MMS purchase, as well as other information targeting husbands who may buy or access prenatal supplements for their wives. Pregnant mothers in both districts emphasized the importance of targeting/including husbands during MMS promotions at community level.

“It would be better to bring the husband to the [community-level] meetings. Since they buy vitamins from the market they need to know about them.” -Bhola, interview, pregnant woman

“It would be good to inform both men and women, because men are more out there [in the community] ...they know all the news outside [of the household] ...then they come and may tell the woman.” -Kurigram, interview, pregnant woman

Community leaders

In addition to husbands, both elected and traditional community leaders are additional indirect influencers to pregnant women in this setting.

“Elite people in the society like Chairman and Member of the Union Parishad [lower administrative unit] should be involved in the marketing process because they play a vital role in society and mothers also abide by them.” -Bhola, focus group, PLW

Finally, including neighbors during social mobilization, or community-level activities promoting MMS, was also suggested given the interdependence of communities in Bangladesh. Reaching pregnant women through multiple different audience segments and varied communication channels may provide the best chance for MMS acceptability and compliance.

Communication channels

Communication channels are the avenues through which messages are conveyed for behavior change. A strong behavior change strategy should include a combination of different communication channels to reach the primary, secondary, and tertiary audience segments uniquely and repeatedly. The table below outlines the communication channels identified during this formative research for reaching pregnant women and their influencers.

Table 17 *Trusted communication channels for promoting MMS to audience segments*

Type of communication channel	Brief channel overview	Preferred communication channels in Bhola and Kurigram
Interpersonal	Direct communications among people typically by word-of-mouth but also by using job aides and other small print media to guide discussion	<ul style="list-style-type: none"> • Community clinic staff (CHCP, FWA, HA, doctors) • Community health workers • Direct phone calls
Social mobilization	Activities that engage entire segments of communities through participatory and social events	<ul style="list-style-type: none"> • Community meetings
Media-based	Using various media to sensitive communities, pass messages, and communicate. Media may include social (e.g. Facebook), print (e.g. brochures), and other forms such as radio	<ul style="list-style-type: none"> • Billboards placed in front of clinics/ pharmacies • Radio • Television advertisements

Interpersonal approaches. Most mothers and health workers in both Bhola and Kurigram explained that one of the best ways to promote MMS is by using interpersonal communications to reach pregnant women.

“If the health workers go door-to-door to talk to pregnant women, like we get from BRAC workers...it will be the best way to get [MMS] tablets and advice.”

-Bhola, interview, pregnant woman

Facility-based workers, especially doctors, were suggested as a powerful interpersonal channel to promote MMS to pregnant women.

“The mothers can also be informed through the doctors of the Upazila Health Complex, NGO workers, and through poster leaflets.” -Kurigram, interview, health worker

Some participants explained that doctors are so trusted that they should also make community visits to promote MMS.

“Doctors should come to community and explain about MMS to convince mothers to use it.”

-Kurigram, focus group, PLW

Interpersonal communication channels require adequate trainings of the individuals who will be asked to promote MMS, as well as job aides to assist with frequently asked questions such as possible MMS side effects.

Social mobilization activities. During interviews in Bhola and Kurigram we heard that community meetings, or seminars, are important channels to sensitive community members, pass information, and promote a new product such as MMS.

“The community health volunteers should go to every pregnant woman...or arrange a group meeting and talk with everyone to motivate them [to use MMS].”

-Kurigram, interview, pregnant woman

“It would be better to have a meeting with five to ten families, then mothers will be able to know about vitamins.” -Bhola, interview, pregnant woman

The government-supported health facilities, where antenatal care services are typically accessed by most women, were identified as locations where such events could take place.

“If possible, hold a seminar at the Upazila Health Complex, where the Medical Officer FWV CHCP will be present.” -Kurigram, interview, health worker

Additionally, there was some suggestion of using loudspeakers to make community-wide announcements related to MMS when it is available.

Media-based approaches. Both pregnant woman and health workers suggested that media channels may be a useful way to promote MMS. Some participants suggested using print media, *“Posters and leaflets can be considered part of a campaign...”* to promote MMS whereas others indicated that a combination of social media, posters, leaflets, and television advertisements would be most effective to reach the different audience segments in Bhola and Kurigram.

Tailoring messages to promote MMS

The table below highlights salient words and phrases that we identified during this formative work for inclusion in social and behavior change communications promoting be used to promote MMS through various communication channels.

Table 18 Words and phrases to tailor messaging for promoting MMS in Bhola and Kurigram

Bengali phrases	Approximate English equivalents
Ma k pustikhaoai, ma o sishu k susthorakhi	Feed mother nutrients, keep mother-child well
Mayer kothavabte hole, pustirkothavabtehobe	If we care for mother, we have to care about nutrition
Gorvobotimayer vitamin, Khetehobeprotidin	Pregnant mothers must take vitamins every day
Ma oshudhkhele pore, ma o sishususthothake	Mother-child will stay healthy, mother's vitamins will be by their side
Ma khele vitamin, Bacchathakbesuthoprotidin	If the mother takes vitamins, the child will stay healthy every day
Ma jodikhai vitamin, bacchasusthothakbeprotidin	If the mother takes vitamins, her body will remain healthy every day
Khelepusti ma, bacchathaklovalo	If the mother takes vitamins, the child will get nutrition every day

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Appendix A: Complete Community Workshop Results

Question 1: To start we would like you to tell us what challenges regarding nutrition that pregnant women in this community face. Let's vote on the foremost challenges. You will have 5 votes to use. You can use all your votes on one challenge or split them up.

Table 1 Workshop findings from in Kurigram and Bhola districts around barriers to optimal nutrition during pregnancy

Site	Suggested barriers	Top votes on suggested barriers
Kurigram District		
Participatory Workshop 1	Problem in communication-damaged roads, trouble during rainy season (48 votes)	Poverty/ Financial problems (65 votes)
	Poverty/Financial problems (13 votes)	Problem in communication -damaged roads, trouble during rainy season (57 votes)
	Physical weakness (8 votes)	
	Scarcity of medicine supply (7 votes)	
	Reluctance mothers (4 votes)	Scarcity/lack of medicine supply (24 votes)
	Long distance-hospital, market (4 votes)	Unawareness/misconception/ ignorance (18 votes)
	Scarcity of female health-care workers (3 votes)	
	Prevalence of misconception that child will grow bigger in the womb and they have to opt for operation if nutrition is taken (3 votes)	
	Women feel shy during Pregnancy-to go out (2 votes)	Non-cooperation from husband and mother-in-law (16 votes)
Participatory Workshop 2	Financial problems (19 votes)	Lack of cooperation from family (13 votes)
	Lack of medicine supply in community clinic (17 votes)	
	Lack of cooperation from family (13 votes)	
	Reluctance (6 votes)	
	Healthcare workers do not visit home and provide medicine during Covid-19 (5 votes)	
	Ignorance, unawareness (4 votes)	
Participatory Workshop 3	Lower income (33 votes)	
	Non-cooperation from husband and mother-in-law (16 votes)	
	Unawareness/misconception/ignorance (14 votes)	
	Problems in road and transportation (9 votes)	
	Unavailability of all kinds of vegetables-drought, excessive rainfall, flood (7 votes)	
	Health care centers are far from home (6 votes)	

Site	Suggested barriers	Top votes on suggested barriers
Bhola District		
Participatory Workshop 4	Financial problems (23 votes)	Financial problems/ Due to lower income (73 votes)
	Does not visit the community clinics be-cause they are far/ distance of the community clinics (13 votes)	
	Lack of time (9 votes)	Physical Problems-Stomach bloating, Acidity, smelling issues (24 votes)
	Physical weakness (4 votes)	
	lack of support from husband and mother-in-law (3 votes)	lack of support from husband, mother-in-law and Father-in-law (17 votes)
	Lack of awareness (2 votes)	
	Shyness (1 votes)	
Participatory Workshop 5	Due to lower income (25 votes)	Reluctance-Loss of appetite (11 votes)
	Due to physical weakness (11 votes)	Lack of time (9 votes)
	Husband's non-cooperation, mother-in-law's tendency to not provide nutritious food. (8 votes)	
	Cannot visit community clinic because of long distance between home and clinic (7 votes)	
	Acidity and diarrhea upon eating vegetable (3 votes)	
	Loss of appetite (2 votes)	
	Pregnant mothers feel shy to step out of the house-fear of people's comments (2 votes)	
	Many times, mothers don't eat as they feel reluctant (1 vote)	
Participatory Workshop 6	Financial problem (25 votes)	
	Physical Problems-stomach bloating, acidity, smelling issues (17 votes)	
	Father-in-law, mother-in-law and husband do not provide food-they provide money for other work but in this scenario not food (14 votes)	
	Reluctance-loss of appetite (11 votes)	
	Mothers cannot leave their other child at home to visit hospital (7 votes)	
	Generation gap (3 votes)	

Question 2: We would like to discuss how a micronutrient supplement should look to make it attractive to pregnant women in this community. We will be asking for your ideas for the color, name, logo and slogan for this product. Let's start with color. Please brainstorm a color scheme that you think would suit a product like this. You have 5 votes and can use all 5 on one idea or split them up.

Table 2 Workshop findings from Kurigram and Bhola district around preferred MMS color scheme

Site	Suggested colors for MMS package	Top votes
Kurigram District		
Participatory Workshops 1 & 2	Dark Brown (20 votes)	Green (39 votes)
	Green (20 votes)	White (33 votes)
	Purple (15 votes)	
	White (5 votes)	Purple (25 votes)
Participatory Workshop 3	White (28 votes)	
	Green (19 votes)	
	Brown (15 votes)	
	Red (12 votes)	
	Purple (10 votes)	
	Pink (3 votes)	
Bhola District		
Participatory Workshop 4	White (29 votes)	White (39 votes)
	Pink (7 votes)	
	Purple (5 votes)	Purple (27 votes)
	Sweetish pink (2 votes)	Red and green-Mixed (25 votes)
Participatory Workshop 5	Purple (21 votes)	
	Red (15 votes)	
	White (10 votes)	
	Blue (9 votes)	
	Brown (5 votes)	
	Orange (4 votes)	
Participatory Workshop 6	Red and green-mixed (25 votes)	
	Yellow (18 votes)	
	Pink and purple-mixed (13 votes)	
	Black (11 votes)	
	Red (2 votes)	

Question 3: Next, we would like you to think about a good name for a product like this. The name can be one, two or three words. Let's vote on the names. You have 5 votes and can use all 5 on one idea or split them up.

Table 3 Workshop findings from Kurigram and Bhola district around preferred MMS brand name

Site	Votes on MMS names	Top votes on suggested names
Kurigram District		
Participatory Workshop 1	Mother's Vitamin (38 votes)	Mother's Vitamin (38 votes)
	Pregnant Mother's Vitamin (15 votes)	Mother's Vit (37 votes)
	Mother and Child Vitamin (13 votes)	Mother and Child Vitamin (33 votes)
	Physical-Vitamin (12 votes)	Pregnant Mother's Vitamin (25 votes)
	Vitamin for Mother's weakness (9 votes)	Baby Vit (23 votes)
	Little child's vitamin (7 votes)	
	Nutrition Vitamin (6 votes)	
Participatory Workshop 2	Mother and Child Vitamin (20 votes)	
	Mother Care (16 votes)	
	Mother's Vit (14 votes)	
	Pregnant Mother's Vitamin (10 votes)	
Participatory Workshop 3	Baby Vit (23 votes)	
	Mother's Vit (23 votes)	
	Nutrition bites/Micro nutrient (22 votes)	
	Child's Nutrition (10 votes)	
	All Vit (8 votes)	
Bhola District		
Participatory Workshop 4	Mother-Child (17 votes)	Mother's Vit (29 votes)
	Vitamin Complex (10 votes)	Mother and child Vitamin (27 votes)
	Mother Plus (7 votes)	Mother's Nutrient (25 votes)
	Vitamin Plus (3 votes)	
Participatory Workshop 5	Mother and child Vitamin (21 votes)	Mother and child's Nutrition (19 votes)
	Mother and child's Nutrition (19 votes)	Mother's Vitamin (18 votes)
	Mother's Vitamin (18 votes)	
Participatory Workshop 6	Mother's Vit (29 votes)	
	Mother's Nutrient (25 votes)	
	Mother's Care (8 votes)	
	Mother and child's Vitamin (6 votes)	

Question 4: Now, let's think about a good slogan to represent this product. The slogan could be a short phrase that is memorable. Let's vote on the slogans. You have 5 votes and can use all 5 on one idea or split them up.

Table 4 Workshop findings from Kurigram and Bhola district around preferred MMS slogan

Site	Votes on MMS names	Top votes on suggested names
Kurigram District		
Participatory Workshop 1	Mother-child will stay healthy, Moth-er's vitamin will be by their side (44 votes)	Pregnant mothers must take vitamins every day (47 votes)
	Mother and child will stay healthy (26 votes)	Mother-child will stay healthy, Mother's Vitamin will be by their side (44 votes)
	All of us will go to community clinic, we will keep MMS with us (17 votes)	
	Mother and child will stay healthy, MMS will be with them (12 votes)	Mother and child will stay healthy (26 votes)
Participatory Workshop 2	Pregnant mothers must take vitamins every day (47 votes)	We will eat nutritious food; we will keep the mother and child safe (25 votes)
	Mother and child will stay fit if they take Mother's Vit (10 votes)	
	If taken Mother's Vit, mother and child will stay healthy (5 votes)	
	Mother and child will be satisfied with nutrition (3 votes)	
Participatory Workshop 3	We will eat nutritious food, we will keep the mother and child safe (25 votes)	
	Keep the pregnant mother safe, give her vitamin tablets (21 votes)	
	Let's give the mother nutrition, Let's keep the mother and child healthy (18 votes)	
	Let us take vitamin and stay healthy, let us build a healthy life for the mother and child (14 votes)	
	Taking vitamin is not a mistake; to-day's child is the future of tomorrow (10 votes)	

Site	Votes on MMS names	Top votes on suggested names
Bhola District		
Participatory Workshop 4	If the mother takes vitamin, the child will stay healthy every day (28 votes)	If the mother takes vitamin, the child will stay healthy every day (48 votes)
	Vitamin for the nutrition of mother and child (15 votes)	If the mother takes vitamin, body will remain healthy every day (29 votes)
	Nutritious food is important for mother and child (7 votes)	If the mother takes vitamin, the child will get nutrition every day (26 votes)
Participatory Workshop 5	If the mother takes vitamin, the child will stay healthy every day (20 votes)	
	If you think about mother, you have to think about nutrition (18 votes)	
	The mother taking Nutrition will en-sure the child's health (12 votes)	
Participatory Workshop 6	If the mother takes vitamin, body will remain healthy every day (29 votes)	
	If the mother takes vitamin, the child will get nutrition every day (26 votes)	
	If the mother does not take vitamin, the child will be malnourished (13 votes)	

Question 5: Now, let's discuss what a good logo would look like. The logo could be a simple picture that represents the name and the slogan of the product. Let's vote on the logo ideas. You have 5 votes and can use all 5 on one idea or split them up.

Table 5 Workshop findings from Kurigram and Bhola district around preferred MMS logo

Site	Suggested logo	Top votes on suggested logo
Kurigram District		
Participatory Workshop 1	A child in mother's lap (57 votes)	A child in mother's lap (57 votes)
	A child is lying on mother's lap (36 votes)	Smiling image of mother and child (40 votes)
	A pregnant mother is taking medicine (5 votes)	
	Pregnant mother and child along with mother-in-law beside them (4 votes)	A smiling mother is kissing her Child (26 votes)
	Image of a pregnant mother (2 votes)	
	Image of husband, wife and child together (2 votes)	The mother is holding the child high (21 votes)
Participatory Workshop 2	Smiling image of mother and child (40 votes)	
	A lactating mother is feeding her child (22 votes)	
Participatory Workshop 3	A smiling mother is kissing her Child. (26 votes)	
	The mother is holding the child high (21 votes)	
	Mother will hold the baby in her lap-Healthy mother and child (15 votes)	
	A healthy lactating mother is feeding her child (13 votes)	
	A pregnant mother is sitting with vit-amin rich food in front of her (10 votes)	
Bhola District		
Participatory Workshop 4	Smiling mother holding the child high (35 votes)	Smiling mother holding the child high (35 votes)
	Child in its mother's lap (11 votes)	
	Image of a healthy child (3 votes)	The baby will be held high (26 votes)
Participatory Workshop 5	The baby will be held high (26 votes)	Lactating mother feeding her child with a pregnant mother by her side-age of child will be 1–2 months (25 votes)
	The baby is held vertically in the lap-a 1-year old baby will be standing (16 votes)	
	The mother is holding the baby in her lap-age of child 1 month (8 votes)	
Participatory Workshop 6	Lactating mother feeding her child with a pregnant mother by her side-age of child will be 1–2 months (25 votes)	Photo of a pregnant mother with a food tray in front of her (17 votes)
	Photo of a pregnant mother with a food tray in front of her (17 votes)	
	The child will be held high in the lap (age of child will be 5–6 months, Female child). (16 votes)	

Appendix B: Data collection instruments (English)

Form A. Phase 1 participatory workshop for pregnant and lactating women

Demographic Information:

Data Collector Name: _____

Date: _____

Location: _____

Number of participants: _____

Introduction:

We would like to hear your suggestions on developing a brand for a micronutrient supplement specifically for pregnant women. Please express your ideas freely; there are no right or wrong answers. We will be asking you a series of questions and will vote on your responses.

Branding:

Discuss common brands in the community focusing on colors, names, logos and slogans. Use brands like sports teams as examples.

Question 1: Now, we would like to discuss how a micronutrient supplement should look to make it attractive to pregnant women in this community. We will be asking for your ideas for the color, name, logo and slogan for this product. Let's start with color. Please brainstorm a color scheme that you think would suit a product like this.

- Let's vote on the color schemes. You have 5 votes and can use all 5 on one idea or split them up.

Question 2: Next, we would like you to think about a good name for a product like this. The name can be one, two or three words.

- Let's vote on the names. You have 5 votes and can use all 5 on one idea or split them up.

Question 3: Now, let's think about a good slogan to represent this product. The slogan could be a short phrase that is memorable.

- Let's vote on the slogans. You have 5 votes and can use all 5 on one idea or split them up.

Question 4: Now, let's discuss what a good logo would look like. The logo could be a simple picture that represents the name and the slogan of the product.

- Let's vote on the logo ideas. You have 5 votes and can use all 5 on one idea or split them up.

Thank you for your participation. Does anyone have any additional questions or comments?

Form B. Phase 1 focus group discussion for pregnant and lactating women

Demographic Information:

Data Collector Name: _____

Date: _____

Location: _____

Number of participants: _____

Introduction:

Thank you for taking the time to speak with us today. We would like to hear your thoughts on micronutrient supplement s and supplementation during pregnancy.

1. To start, can everyone tell us a little about their family?

Antenatal Care:

2. What are some common challenges that women face during pregnancy? Can you tell us about your experience with these?
 - Probe on challenges related to nutrition
 - Probe on social support

MMS Products:

3. Now let's discuss your experience with supplements during pregnancy. We have heard that many pregnant women in this community use X (country specific). Can you tell me why that is?
 - Probe on what makes these products desirable
 - Probe on products disliked by the community and reasons why
 - Probe on how these products are used
 - Probe on how easy or difficult it is to use the supplements
 - Probe on how important the use of these products are to pregnant women
4. Can you describe any barriers in getting or using these supplements?
 - Probe on availability
 - Probe on affordability
 - Probe on where supplements are sold
5. Can you describe how these supplements might help you during pregnancy? Can you please explain why that is?

MMS Promotion:

Now we would like to hear your thoughts on how these products should be promoted in this community.

6. Can you describe what a product should look like to make it attractive to pregnant women?
 - Probe on colors
 - Probe on logo
 - Probe on names
 - Probe on colors, names and logos that should not be used

7. Can you tell us where this product should be promoted?
 - Probe on where pregnant women often get health advice
 - Probe on health advertisements in the community
8. Can you tell us who this product should be marketed to?
 - Probe on advertising to fathers
 - Probe on differences in messaging depending on audience

Form C. Phase 1 market observation data collection instrument

Demographic Information:

Data Collector Name: _____

Date: _____

Location: _____

Number of participants: _____

Market Observation Checklist:

Section 1: Momvit	
1. Is Momvit being sold in the community?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a
2. Has Momvit been sold in the community in the past?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a (skip to section 2)
3. What unit of Momvit is being sold?	<input type="checkbox"/> packets of 60 tablets <input type="checkbox"/> single tablet other: _____
4. How much is Momvit being sold for?	_____ (list price of unit in local currency)
Please pick a primary selling location:	_____ units sold in the past week
5. How many units of Momvit does the store owner report selling in the past week?	Location type: _____ (see options below)
6. Who does the store owner most frequently see purchasing Momvit?	<input type="checkbox"/> women <input type="checkbox"/> male <input type="checkbox"/> other: _____
7. What kind of location is selling Momvit in this community?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____
8. How many total number of locations are selling Momvit?	_____ total locations
9. How is Momvit displayed in the store?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____



Section 2: Aristo Mom

10. Is Aristo Mom being sold in the community?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a
11. Has Aristo Mom been sold in the community in the past?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a (skip to section 2)
12. What unit of Aristo Mom is being sold?	<input type="checkbox"/> packets of 60 tablets <input type="checkbox"/> single tablet other: _____
13. How much is Aristo Mom being sold for?	_____ (list price of unit in local currency)
Please pick a primary selling location:	_____ units sold in the past week
14. How many units of Aristo Mom does the store owner report selling in the past week?	Location type: _____ (see options below)
15. Who does the store owner most frequently see purchasing Aristo Mom?	<input type="checkbox"/> women <input type="checkbox"/> male <input type="checkbox"/> other: _____
16. What kind of location is selling Aristo Mom in this community?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____
17. How many total number of locations are selling Aristo Mom?	_____ total locations
18. How is Aristo Mom displayed in the store?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____



Section 3: Acme

19. Is Acme being sold in the community?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a
20. Has Acme been sold in the community in the past?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a (skip to section 2)
21. What unit of Acme is being sold?	<input type="checkbox"/> packets of 60 tablets <input type="checkbox"/> single tablet other: _____
22. How much is Acme being sold for?	_____ (list price of unit in local currency)
Please pick a primary selling location:	_____ units sold in the past week
23. How many units of Acme does the store owner report selling in the past week?	Location type: _____ (see options below)
24. Who does the store owner most frequently see purchasing Acme?	<input type="checkbox"/> women <input type="checkbox"/> male <input type="checkbox"/> other: _____
25. What kind of location is selling Acme in this community?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____
26. How many total number of locations are selling Acme?	_____ total locations
27. How is Acme displayed in the store?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____



Section 4: Incepta

28. Is Incepta being sold in the community?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a
29. Has Incepta been sold in the community in the past?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a (skip to section 2)
30. What unit of Incepta is being sold?	<input type="checkbox"/> packets of 60 tablets <input type="checkbox"/> single tablet other: _____
31. How much is Incepta being sold for?	_____ (list price of unit in local currency)
<i>Please pick a primary selling location:</i>	_____ units sold in the past week
32. How many units of Incepta does the store owner report selling in the past week?	Location type: _____ (see options below)
33. Who does the store owner most frequently see purchasing Incepta?	<input type="checkbox"/> women <input type="checkbox"/> male <input type="checkbox"/> other: _____
34. What kind of location is selling Incepta in this community?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____
35. How many total number of locations are selling Incepta?	_____ total locations
36. How is Incepta displayed in the store?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____



Section 5: Square

36. Is Square being sold in the community?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a
37. Has Square been sold in the community in the past?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a (skip to section 2)
38. What unit of Square is being sold?	<input type="checkbox"/> packets of 60 tablets <input type="checkbox"/> single tablet other: _____
39. How much is Square being sold for?	_____ (list price of unit in local currency)
<i>Please pick a primary selling location:</i>	_____ units sold in the past week
40. How many units of Square does the store owner report selling in the past week?	Location type: _____ (see options below)
41. Who does the store owner most frequently see purchasing Square?	<input type="checkbox"/> women <input type="checkbox"/> male <input type="checkbox"/> other: _____
42. What kind of location is selling Square in this community?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____
43. How many total number of locations are selling Square?	_____ total locations
44. How is Square displayed in the store?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____



Section 6: Opsonin

44. Is Opsonin being sold in the community?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a
45. Has Opsonin been sold in the community in the past?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a (skip to section 2)
46. What unit of Opsonin is being sold?	<input type="checkbox"/> packets of 60 tablets <input type="checkbox"/> single tablet other: _____
47. How much is Opsonin being sold for?	_____ (list price of unit in local currency)
Please pick a primary selling location:	_____ units sold in the past week
48. How many units of Opsonin does the store owner report selling in the past week?	Location type: _____ (see options below)
49. Who does the store owner most frequently see purchasing Opsonin?	<input type="checkbox"/> women <input type="checkbox"/> male <input type="checkbox"/> other: _____
50. What kind of location is selling Opsonin in this community?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____
51. How many total number of locations are selling Opsonin?	_____ total locations
52. How is Opsonin displayed in the store?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____



Form D. Phase 2 free listing for pregnant and lactating women

Demographic Information:

Data Collector Name: _____

Location: _____ Location: _____

Respondent characteristics: Age: _____ Gender: _____ Number of Children: _____

No.	Free List Question	Comments to guide field notes
	List all of the different foods that pregnant women consume in this community.	<ul style="list-style-type: none"> Probe on the top 5 foods mentioned to determine well as a description of that food in general. You might probe about their availability by season. Probe on any foods that seem confusing, new, or unclear to you for further clarification.
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
No.	Free List Question	Comments
	List for me all of the illnesses that you suffer from as a pregnant woman in this community.	<ul style="list-style-type: none"> After listing, probe on the top 5 illnesses to get local explanations. Probe on any nutrition-related illnesses (e.g., anemia). Probe on any illnesses that seem confusing, new, or contradictory to you.
1.		
2.		
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11.		
12.		
13.		
14.		
15.		

Form E. Phase 2 pile sorting for pregnant and lactating women

Demographic Information:

Data Collector Name: _____

Location: _____ Location: _____

Respondent characteristics: Age: _____ Gender: _____ Number of Children: _____

Introduction

Question 1 Maternal Illness: In order to help me understand more about illnesses pregnant women experience in this community, I'd like to ask you to tell me which illnesses go with each other. I've made a list of some illnesses that are commonly experienced here. **Please sort these illnesses into any piles based on how similar or different they are from one another.** There is no right or wrong way. (Rules: respondents may not put all illnesses into one pile or separate them into its own pile.)

Pile	Card Number
1	
Explanation for Pile 1:	
2	
Explanation for Pile 2:	
3	
Explanation for Pile 3:	
4	
Explanation for Pile 4:	

Pile Sort Question 2 (Illness Severity). Now I want you to re-sort these cards. In order to help me understand more about illness in this community, I'd like to ask you to put these illnesses into 3 piles based on how severe they are: **1) most severe, 2) moderately severe, 3) less severe.** There is no right or wrong way; it is just your perception.

Pile	Card Number
1	
Explanation for Pile 1:	
2	
Explanation for Pile 2:	
3	
Explanation for Pile 3:	
4	
Explanation for Pile 4:	

Pile Sort Question 3 (Pregnant Women Foods). In order to help me understand more about food in this community, I'd like to ask you to tell me which foods go with each other. I've made a list of some foods that are commonly eaten here among pregnant women. Here they are. **Please sort these foods into any piles (as many piles as you wish) based on how similar or different they are from one another.** There is no right or wrong way to do this.

Pile	Card Number
1	
Explanation for Pile 1:	
2	
Explanation for Pile 2:	
3	
Explanation for Pile 3:	
4	
Explanation for Pile 4:	
5	
Explanation for Pile 5:	
6	

Pile Sort Question 4 (Pregnant Women Foods). In order to help me understand more about food in this community, I'd like to ask you to tell me which foods go with each other. I've made a list of some foods that are commonly eaten here among pregnant women. Here they are. **Please sort these foods into 3 piles based on how nutritious/healthy they are for healthy pregnancy: 1) most nutritious, 2) somewhat nutritious, 3) least nutritious.** There is no right or wrong way to do this.

Pile	Card Number
1	
Explanation for Pile 1:	
2	
Explanation for Pile 2:	
3	
Explanation for Pile 3:	

Potential follow-up questions for explanations of each pile

- Tell me about pile X, Y, Z, etc. and how these cards are similar
- I notice that these cards are in different piles. Could you explain that for me?
- If you could name each of these piles, how would you do so

Form F. Phase 2 semi-structured interview guide for pregnant women

Demographic Information:

Data Collector Name: _____

Date: _____

Location: _____

Introduction:

1. Thank you for taking the time to speak with me. To start, can you please tell me about your family?
2. Could you please tell me about a typical day for you?
3. Now can you tell me about the resources available for pregnant women in this community?

Antenatal Care:

Now I would like to know more about health during pregnancy in this community.

4. Can you please describe what a healthy pregnancy should look like?
5. Can you please describe any changes to your diet after you became pregnant?
 - Probe on any advice regarding diet during pregnancy received
 - Probe on who gave her the advice
 - Probe on foods that are good for pregnant women
 - Probe on foods that pregnant women should avoid
 - Probe on how easy or difficult it is to maintain a healthy diet during pregnancy
6. Can you please describe the illnesses that pregnant women in this community suffer from?
 - Probe on seriousness of illnesses
 - Probe on diseases she is most concerned about
 - Probe on consequences of untreated illness
 - Probe on the cause of each illness
 - Probe on prevention of each illness
 - Probe on treatment
7. Can you describe any health care you have received from the time you knew you were pregnant to now?
 - Probe on healthcare seeking practices
 - Probe on knowledge of when to seek care
8. What barriers do women in this community face in staying healthy during pregnancy?
 - Probe on community support
 - Probe on family support
 - Probe on access to care

Micronutrient Supplement

This is great information. Now I would like to hear your thoughts on micronutrient supplements.

9. Can you describe how a micronutrient supplement could help you stay healthy during your pregnancy?
 - Probe on illness prevention
10. Can you describe any similar products that you or other pregnant women in your community use?
 - Probe on source of supplements
 - Probe on availability
 - Probe on affordability
 - Probe on sharing
 - Probe on what makes them desirable
 - Probe on products that are not desirable
 - Probe on perception of product
 - Probe on other medications used during pregnancy
11. Can you describe how these products were explained to you?
 - Probe on who told her about these products
 - Probe on how effective this explanation was
 - Probe on how it could be improved
12. Can you please tell me how to best market a micronutrient supplement to pregnant women in this community?
 - Probe on ways to promote the product
 - Probe on effective distribution channels

Thank you for your time. Is there anything else you would like to discuss that was not brought up?

Form F. Phase 2 semi-structured interview guide for health workers

Demographic Information:

Data Collector Name: _____

Date: _____

Location: _____

Introduction:

1. Could you please tell me about your role in the community?
2. Tell me about a typical day as a health worker?
3. Can you please describe what health care resources there are for pregnant women in this community?

Antenatal Care:

Now I would like to know more about health during pregnancy in this community.

4. Can you please describe what a healthy pregnancy should look like?
5. Can you please describe the illnesses that pregnant women in this community suffer from?
 - a. Probe on seriousness of illnesses
 - b. Probe on consequences of untreated illness
 - c. Probe on the cause of each illness
 - d. Probe on prevention of each illness
 - e. Probe on treatment
6. Can you tell me about illnesses that you are most concerned with?
 - a. Probe on specific stories/narratives
7. Tell me about the care that a pregnant woman receives over the course of her pregnancy
 - a. Probe on any nutritional advice given to pregnant women
 - b. Probe on any resources provided to women
 - c. Probe on if advice is followed
 - d. Probe on if resources align with advice
 - e. Probe on reasons why women may or may not follow advice
 - f. Probe on healthcare seeking practices
8. What barriers do women in this community face in staying healthy during pregnancy?
 - a. Probe on community/family support
 - b. Probe on access to care

Micronutrient Supplement

This is great information. Now I would like to hear your suggestions about developing a program that will introduce a micronutrient food supplement.

- 9.** Can you describe how a micronutrient supplement would help a woman stay healthy during her pregnancy?
 - a.** Probe on illness prevention
- 10.** Can you describe similar products that pregnant women in this community use?
 - a.** Probe on source of medications/ supplements
 - b.** Probe on affordability
 - c.** Probe on sharing
 - d.** Probe on what makes them desirable
 - e.** Probe on products that are not desirable
 - f.** Probe on acceptability of micronutrient supplement
 - g.** Probe on perception of product
- 11.** Please describe the most effective way to market a micronutrient supplement in this community?
 - a.** Probe on trusted communication channels
 - b.** Probe on distribution channels
 - c.** Probe on how to explain the micronutrient supplement to women
 - d.** Probe on best ways to ensure that the product is being used correctly

Thank you for your time. Is there anything else you would like to discuss that was not brought up?

Appendix C: Data collection instruments (Bengali)

Form A: Free Listing

ফর্ম এ : (ফ্রি লিস্টিং)

Demographic Information (জনসংখ্যা বিষয়ক তথ্য):

Data Collector Name (তথ্য সংগ্রহকারীর নাম): _____

Date (তারিখ): _____ Location (অবস্থান): _____

Respondent characteristics (উত্তরদাতার বৈশিষ্ট্য):

Age বয়স: _____ Gender লিঙ্গ: _____

Number of Children সন্তানের সংখ্যা: _____

No.	Free List Question	Comments to guide field notes
	List all of the different foods you consume in this community. উত্তরদাত্রী এই এলাকার বাসিন্দা হিসেবে যে ধরনের খাবার খেয়ে থাকেন সেগুলোর তালিকা করুন	<ul style="list-style-type: none"> Probe on the top 5 foods mentioned to determine well as a description of that food in general উত্তরদাত্রীর উল্লেখিত খাবারের তালিকা থেকে প্রথম ৫ টি খাবারের নাম উল্লেখ করুন ও বিস্তারিত জানতে চান You might probe about their availability by season. Probe on any foods that seem confusing, new, or unclear to you for further clarification. আপনি জিজ্ঞাসা করুন বছরের কোন কোন ঋতুতে এই খাবারগুলো পাওয়া যায়। সেইসাথে যে সব খাবারের নাম আপনার কাছে অপরিস্টিত এবং নতুন মনে হচ্ছে সে সব খাবার সম্পর্কে পুনরায় জিজ্ঞেস করে নিশ্চিত হোন।
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11.		
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13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		

No.	Free List Question	Comments
	<p>List for me all of the illnesses that you suffer from as a pregnant woman in this community.</p> <p>উত্তরদাত্রী তার গর্ভকালীন সময়ে যে সকল গর্ভকালীন জটিলতার সম্মুখীন হয়েছেন তার তালিকা করুন</p>	<ul style="list-style-type: none"> After listing, probe on the top 5 illnesses to get local explanations উত্তরদাত্রীর উল্লেখিত গর্ভকালীন জটিলতা থেকে প্রথম ৫ টি জটিলতার নাম উল্লেখ করুন ও জটিলতাগুলো সম্পর্কে আপনাদের এলাকার মানুষের ধারণা সম্পর্কে বিস্তারিত জিজ্ঞেস করুন। Probe on any nutrition-related illnesses (e.g., anemia). Probe on any illnesses that seem confusing, new, or contradictory to you. পুষ্টি সম্পর্কিত কোন অসুস্থতা যেমন- রক্তস্রাবতা বা রক্তাশ্রাবতা ছিল কিনা সে সম্পর্কে জিজ্ঞেস করুন। সেইসাথে যে সব গর্ভকালীন জটিলতার নাম আপনার কাছে অপরিচিত এবং নতুন মনে হচ্ছে সে সব জটিলতা সম্পর্কে পুনরায় জিজ্ঞেস করে নিশ্চিত হোন।
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		

Form B: Pile Sorting

Demographic Information (জনসংখ্যা বিষয়ক তথ্য):

Data Collector Name (তথ্য সংগ্রহকারীর নাম): _____

Date (তারিখ): _____ Location (অবস্থান): _____

Respondent characteristics (উত্তরদাতার বৈশিষ্ট্য):

Age বয়স: _____ Gender লিঙ্গ: _____

Number of Children সন্তানের সংখ্যা: _____

Introduction

ভূমিকা

Question 1 Maternal Illness (প্রশ্ন ১ গর্ভকালীন জটিলতা) : In order to help me understand more about illnesses pregnant women experience in this community, I'd like to ask you to tell me which illnesses go with each other. I've made a list of some illnesses that are commonly experienced here. Please sort these illnesses into piles, in whatever way you think is best, in as many piles as you wish. There is no right or wrong way. **(Rules: respondents may not put all illnesses into one pile or separate them into each into its own pile.)**

এই এলাকার গর্ভবতী মহিলাদের গর্ভকালীন জটিলতা সম্পর্কে ভালোভাবে জানার জন্য আপনার সাহায্য প্রয়োজন। আপনার এলাকায় কোন ধরনের গর্ভকালীন জটিলতা মহিলাদের সাধারণত হয়ে থাকে সে সম্পর্কে আমি আপনার কাছে জানতে চাইব। আমি আপনার এলাকার গর্ভবতী মহিলাদের গর্ভকালীন জটিলতার একটা তালিকা তৈরি করেছি। যেভাবে আপনার ভালো মনে হয় সেভাবেই আপনি গর্ভকালীন জটিলতাগুলো এক একটা শ্রেণীতে রাখতে পারবেন এবং চাইলে একাধিক শ্রেণী ব্যবহার করতে পারবেন। এখানে কোন ঠিক বা ভুল হয়ার কিছু নেই।

(নিয়ম-উত্তরদাত্রী যে সব জটিলতার কথা বলবে তা একই শ্রেণীতে ফেলতে পারবে না। প্রতিটি আলাদা শ্রেণীতে ফেলবে।)

Pile	Card Number কার্ড নম্বর									
1										
Explanation for Pile 1: পাইল ১ এর জন্য ব্যাখ্যা:										
2										

Explanation for Pile 2: পাইল ২ এর জন্য ব্যাখ্যাঃ											
3											
Explanation for Pile 3: পাইল ৩ এর জন্য ব্যাখ্যাঃ											
4											
Explanation for Pile 4: পাইল ৪ এর জন্য ব্যাখ্যাঃ											
5											
Explanation for Pile 5: পাইল ৫ এর জন্য ব্যাখ্যাঃ											
6											
Explanation for Pile 6: পাইল ৬ এর জন্য ব্যাখ্যাঃ											

Pile Sort Question 2 (Illness Severity). Now I want you to re-sort these cards. In order to help me understand more about illness in this community, I'd like to ask you to put these illnesses into 3 piles based on how severe they are: 1) most severe, 2) moderately severe, 3) less severe. There is no right or wrong way; it is just your perception.

Pile Sort প্রশ্ন ২ (জটিলতার তীব্রতা) আপনার এলাকার মহিলাদের গর্ভকালীন জটিলতাগুলো কোনটা কতটা মারাত্মক সে সম্পর্কে আরো ভালোভাবে জানার জন্য এখন আমি কার্ডগুলোকে ১। সবচেয়ে গুরুতর ২) মাঝারী গুরুতর, ৩) কম গুরুতর হিসেবে পুনরায় সাজাতে চাই। এখানে কোন ভুল বা ঠিক হয়ার কিছু নেই, এটা আপনার মতামতের উপর নির্ভর করবে।

Pile	Card Number কার্ড নম্বর										
1											
Explanation for Pile 1: পাইল ১ এর জন্য ব্যাখ্যা:											
2											
Explanation for Pile 2: পাইল ২ এর জন্য ব্যাখ্যা:											
3											
Explanation for Pile 3: পাইল ৩ এর জন্য ব্যাখ্যা:											

Pile Sort Question 3 (Pregnant Women Foods). In order to help me understand more about food in this community, I'd like to ask you to tell me which foods go with each other. I've made a list of some foods that are commonly eaten here among pregnant women. Here they are. Please sort these foods into piles, in whatever way you think is best, in as many piles as you wish. There is no right or wrong way to do this.

Pile Sort প্রশ্ন ৩ (গর্ভবতী মহিলার খাবার) আমি আপনার কাছে এই এলাকার গর্ভবতী মহিলাদের খাবার সম্পর্কে আরো ভালোভাবে জানার জন্য কোন খাবারের সাথে কোন খাবারের মিল আছে সে সম্পর্কে জানতে চাই। এই এলাকার গর্ভবতী মহিলারা সাধারণত যে সমস্ত খাবার খেয়ে থাকেন সেই সমস্ত খাবারের একটি তালিকা রয়েছে, আপনি আপনার ইচ্ছেমত এখান থেকে খাবার গুলো এক একটা শ্রেণীতে রাখতে পারবেন এবং চাইলে একাধিক শ্রেণী ব্যবহার করতে পারবেন। এখানে ঠিক বা ভুল হওয়ার কিছু নেই।

Pile	Card Number কার্ড নম্বর										
1											
Explanation for Pile 1: পাইল ১ এর জন্য ব্যাখ্যা:											
2											
Explanation for Pile 2: পাইল ২ এর জন্য ব্যাখ্যা:											
3											

Explanation for Pile 3:
পাইল ৩ এর জন্য ব্যাখ্যা:

4

Explanation for Pile 4:
পাইল ৪ এর জন্য ব্যাখ্যা:

5

Explanation for Pile 5:
পাইল ৫ এর জন্য ব্যাখ্যা:

6.

Explanation for Pile 6:
পাইল ৬ এর জন্য ব্যাখ্যা:

Pile Sort Question 4 (Pregnant Women Foods). In order to help me understand more about food in this community, I'd like to ask you to tell me which foods go with each other. I've made a list of some foods that are commonly eaten here among pregnant women. Here they are. **Please sort these foods into 3 piles based on how nutritious/healthy they are for healthy pregnancy: 1) most nutritious, 2) somewhat nutritious, 3) least nutritious.** There is no right or wrong way to do this.

Pile Sort প্রশ্ন ৪ (গর্ভবতী মহিলার খাবার) আমি আপনার কাছে এই এলাকার গর্ভবতী মহিলাদের খাবার সম্পর্কে আরো ভালোভাবে জানার জন্য কোন খাবারের সাথে কোন খাবারের মিল আছে সে সম্পর্কে জানতে চাই। এই এলাকার গর্ভবতী মহিলারা সাধারণত যে সমস্ত খাবার খেয়ে থাকেন সেই সমস্ত খাবারের একটি তালিকা আমরা তৈরি করেছি। এই দেখুন। এখন দয়া করে, খাবার গুলো একজন গর্ভবতীর জন্য কতটা পুষ্টিকর বা স্বাস্থ্য সম্মত তার ওপর ভিত্তি করে আপনি তিনটি পাইলে সাজান। সাজানোর ক্ষেত্রে পাইল তিনটিকে এভাবে চিন্তা করুন: ১) খুব পুষ্টিকর, ২) কিছুটা পুষ্টিকর, ৩) কম পুষ্টিকর। এখানে ঠিক বা ভুল হওয়ার কিছু নেই।

Pile	Card Number										
1											
Explanation for Pile 1:											
2											
Explanation for Pile 2:											
3											
Explanation for Pile 3:											

Potential follow-up questions for explanations of each pile

প্রতিটি শ্রেণীর ব্যাখ্যার জন্য সম্ভাব্য ফলোআপ প্রশ্ন

- Tell me about pile X, Y, Z, etc. and how these cards are similar
আমাকে পাইল X, Y, Z, ইত্যাদি সম্পর্কে বলুন এবং কার্ড গুলোর মধ্যে মিল গুলো বলুন)
- I notice that these cards are in different piles. Could you explain that for me?
আমি লক্ষ্য করছি এই কার্ড গুলো বিভিন্ন শ্রেণীর মধ্যে রয়েছে। আপনি কি এটি ব্যাখ্যা করতে পারবেন ?
- If you could name each of these piles, how would you do so?
আপনি যদি এই শ্রেণী গুলোর প্রত্যেকটির নাম রাখেন তবে কিভাবে তা করবেন ?

Form C: Pregnant Women Semi Structured Interview

Demographic Information

জনসংখ্যা বিষয়ক তথ্য

Data Collector Name (তথ্য সংগ্রহকারীর নামঃ) _____ Date (তারিখঃ) _____

Location (স্থানঃ): _____

Introduction (ভূমিকাঃ)

1. Thank you for taking the time to speak with me. To start, can you please tell me about your family?

আমার সাথে কথা বলার জন্য এবং সময় দেয়ার জন্য আপনাকে ধন্যবাদ। আপনি কি আমাকে আপনার পরিবার সম্পর্কে বলতে পারেন ?

2. Could you please tell me about a typical day for you?

আপনি কি আমাকে আপনার একটি সাধারণ দিন সম্পর্কে আমাকে বলবেন ?

3. Now can you tell me about the resources available for pregnant women in this community?

আপনি কি আমাকে এই এলাকার গর্ভবতী মহিলাদের জন্য কি কি স্বাস্থ্য সেবা পাওয়া যায় সে সম্পর্কে বলতে পারেন ?

Antenatal Care: গর্ভকালীন যত্নঃ

Now I would like to know more about health during pregnancy in this community.

এখন আমি এই এলাকার গর্ভবতী মহিলাদের গর্ভকালীন স্বাস্থ্য সম্পর্কে জানতে চাই।

4. Can you please describe what a healthy pregnancy should look like?

আপনি কি বলতে পারেন যে সুস্থ/ ভাল গর্ভাবস্থা কেমন হওয়া উচিত ?

5. Can you please describe any changes to your diet after you became pregnant?

আপনি গর্ভবতী হওয়ার পরে আপনার খাদ্য তালিকায় কোন পরিবর্তন এসেছে কি ?

- Probe on any advice regarding diet during pregnancy received
গর্ভাবস্থায় কি কি খাবার খেতে হবে সে সম্পর্কিত কোন পরামর্শ পেয়েছিলেন কিনা সে সম্পর্কে জানুন।
- Probe on who gave her the advice
কার কাছ থেকে পরামর্শ পেয়েছিলো সে সম্পর্কে জানুন।
- Probe on foods that are good for pregnant women
গর্ভবতী মহিলার জন্য স্বাস্থ্যকর খাবার গুলো কি কি সে সম্পর্কে জানুন।
- Probe on foods that pregnant women should avoid
গর্ভবতী মহিলাদের জন্য যে সকল খাবার খাওয়া ঠিক নয় সে সম্পর্কে জানুন।
- Probe on how easy or difficult it is to maintain a healthy diet during pregnancy
গর্ভাবস্থায় স্বাস্থ্যকর খাদ্যাভাস মেনে চলা কতটা সহজ বা কঠিন সে সম্পর্কে জানুন

6. Can you please describe the illnesses that pregnant women in this community suffer from?

আপনি কি বলতে পারেন, এই এলাকার গর্ভবতী মহিলারা কি ধরনের অসুস্থতায় ভুগে থাকেন?

- Probe on seriousness of illnesses
অসুস্থতার কতটুকু মারাত্মক সে সম্পর্কে জানুন।
- Probe on diseases she is most concerned about
সে যে সমস্ত রোগ নিয়ে বেশী চিন্তিত সে সম্পর্কে জানুন।
- Probe on consequences of untreated illness
অসুস্থ হলে চিকিৎসা না নেয়ার পরিণতি সম্পর্কে জানুন।
- Probe on the cause of each illness
প্রতিটি অসুস্থতার কারন সম্পর্কে জানুন।
- Probe on prevention of each illness
প্রতিটি অসুস্থতার প্রতিরোধের উপায় সম্পর্কে জানুন।
- Probe on treatment
চিকিৎসা সম্পর্কে জানুন।

7. Can you describe any health care you have received from the time you knew you were pregnant to now?

আপনি গর্ভবতী হওয়ার পর থেকে যে সব স্বাস্থ্য সেবা পেয়েছেন তা কি বলতে পারবেন?

- Probe on healthcare seeking practices
এই এলাকায় কি কি স্বাস্থ্য সেবা সাধারণত নিয়ে থাকেন সে সম্পর্কে জানুন।
- Probe on knowledge of when to seek care
কখন সেবা নিতে হবে সে সম্পর্কে তিনি কতটুকু জানেন, তা জানুন।

8. What barriers do women in this community face in staying healthy during pregnancy?

এই এলাকায় মহিলারা গর্ভবতী অবস্থায় সুস্থ থাকার জন্য কোন কোন বাধার সম্মুখীন হন?

- Probe on community support
সামাজিক ভাবে কতটুকু সাহায্য পায় সে সম্পর্কে জানুন।
- Probe on family support
পারিবারিক ভাবে কতটুকু সাহায্য পায় সে সম্পর্কে জানুন।
- Probe on access to care
স্বাস্থ্য সেবা কতটা সহজ ভাবে পাওয়া যায় সে সম্পর্কে জানুন।

Micronutrient Supplement (সম্পূরক অনুপুষ্টি কনা)

This is great information. Now I would like to hear your thoughts on micronutrient supplements.

এটি একটি গুরুত্বপূর্ণ তথ্য। এখন আমি সম্পূরক অনুপুষ্টি কনা সম্পর্কে আপনার মতামত জানতে চাই।

9. Can you describe how a micronutrient supplement could help you stay healthy during your pregnancy?

আপনি কি বলতে পারেন, কিভাবে পুষ্টি কনা (যেমনঃ ...) গর্ভাবস্থায় সুস্থ থাকতে সাহায্য করে?

- Probe on illness prevention
অসুস্থতা কিভাবে প্রতিরোধ করা যায় সে সম্পর্কে জানুন।

10. Can you describe any similar products that you or other pregnant women in your community use?

আপনি বা আপনার এলাকার অন্যান্য গর্ভবতী মহিলারা একই ধরনের যে সমস্ত পুষ্টি কনা ব্যবহার করেন সে সম্পর্কে বলতে পারবেন?

- Probe on source of supplements
পুষ্টি কনা কোথায় পাওয়া যায় সে সম্পর্কে জানুন।
- Probe on availability
সহজলভ্যতা সম্পর্কে জানুন।
- Probe on affordability
ক্রয় ক্ষমতা সম্পর্কে জানুন।
- Probe on sharing
ভাগ করে নেয়া সম্পর্কে জানুন।
- Probe on what makes them desirable
কোন কোন বিষয় আপনাকে এই পুষ্টি কনা নির্বাচন/ পছন্দ করতে সাহায্য করে সে সম্পর্কে জানুন।
- Probe on products that are not desirable
কোন কোন কারণে পুষ্টি কনা আপনার পছন্দ নয় সে সম্পর্কে জানুন।
- Probe on perception of product
পুষ্টি কনা সম্পর্কে মতামত জানুন।
- Probe on other medications used during pregnancy
গর্ভবতী অবস্থায় অন্যান্য ওষুধ এর ব্যবহার সম্পর্কে জানুন।

11. Can you describe how these products were explained to you?

আপনার কাছে এই পুষ্টি কনা সম্পর্কে কিভাবে ব্যাখ্যা করা হয়েছিলো তা কি বলতে পারবেন ?

- Probe on who told her about these products
এই পুষ্টি কনা সম্পর্কে তাকে কে জানিয়ে ছিলো সে সম্পর্কে জানুন।
- Probe on how effective this explanation was
পুষ্টি কনা সম্পর্কে দেয়া ব্যাখ্যাটি কতটুকু কার্যকরী ছিলো সে সম্পর্কে জানুন।
- Probe on how it could be improved
ব্যাখ্যাটি আরো কিভাবে ভালোভাবে দেয়া যেতো সে সম্পর্কে জানুন।

12. Can you please tell me how to best market a micronutrient supplement to pregnant women in this community?

আপনি কি আমাকে বলবেন, কিভাবে এই এলাকায় গর্ভবতী মহিলাদের জন্য একটি পুষ্টি কনা আরো ভালো ভাবে বাজারজাত করা যায় ?

- Probe on ways to promote the product
পুষ্টি কনা কিভাবে প্রচার করা যায় সে সম্পর্কে জানুন।
- Probe on effective distribution channels
পুষ্টি কনা কার্যকর ভাবে কিভাবে বিতরণ করা যায় সে সম্পর্কে জানুন।

13. Thank you for your time. Is there anything else you would like to discuss that was not brought up?

আপনি যে আমাকে সময় দিয়েছেন এর জন্য আপনাকে ধন্যবাদ। আর এমন কিছু কি আছে যা সম্পর্কে এ পর্যন্ত বলা হয়নি কিন্তু আপনি বলতে চান/ আলোচনা করতে চান ?

Form D: Health Worker Semi Structured Interview

Demographic

জনসংখ্যা বিষয়ক তথ্য

Data Collector Name (তথ্য সংগ্রহকারীর নামঃ) _____ Date (তারিখঃ) _____

Location (স্থানঃ) _____

Introduction: ভূমিকা

- 1. Could you please tell me about your role in the community?**
এ এলাকায় স্বাস্থ্যসেবা দেওয়ার ক্ষেত্রে আপনার দায়িত্ব সম্পর্কে আমাকে বলতে পারেন ?
- 2. Tell me about a typical day as a health worker?**
আপনি একজন স্বাস্থ্যকর্মী হিসাবে আপনার একটি সাধারণ দিন সম্পর্কে আমাকে বলতে পারেন ?
- 3. Can you please describe what health care resources there are for pregnant women in this community?**
এই এলাকার গর্ভবতী মহিলাদের জন্য কি কি স্বাস্থ্য সেবার সুযোগ সুবিধা আছে সে সম্পর্কে আপনি কি আমাকে বলতে পারেন ?

Antenatal Care: গর্ভকালীন সেবাঃ

Now I would like to know more about health during pregnancy in this community.

এখন আমি এই এলাকার গর্ভবতী মহিলাদের গর্ভকালীন স্বাস্থ্য সম্পর্কে জানতে চাই।

- 4. Can you please describe what a healthy pregnancy should look like?**
আপনি কি বলতে পারেন, সুস্থ/ ভাল গর্ভাবস্থা কেমন হওয়া উচিত ?
- 5. Can you please describe the illnesses that pregnant women in this community suffer from?**
এই এলাকার গর্ভবতী মহিলারা যে সব অসুস্থতায় ভুগে থাকেন সে সম্পর্কে আপনি কি আমাকে বলতে পারেন?
 - Probe on seriousness of illnesses
অসুস্থতা কতটুকু মারাত্মক সে সম্পর্কে জানুন।
 - Probe on consequences of untreated illness
অসুস্থ হলে চিকিৎসা না নিলে কি হতে পারে সে সম্পর্কে জানুন।
 - Probe on the cause of each illness
প্রতিটি অসুস্থতার কারন সম্পর্কে জানুন।
 - Probe on prevention of each illness
প্রতিটি অসুস্থতার প্রতিরোধের উপায় সম্পর্কে জানুন।
 - Probe on treatment
চিকিৎসা সম্পর্কে জানুন।
- 6. Can you tell me about illnesses that you are most concerned with?**
আপনি যে সব রোগ গুলি নিয়ে বেশী চিন্তিত সে সম্পর্কে আমাকে বলতে পারেন ?
 - Probe on specific stories/ narratives
নির্দিষ্ট গল্প / বর্ণনা সম্পর্কে জানুন।

7. Tell me about the care that a pregnant woman receives over the course of her pregnancy?

গর্ভবতী মহিলারা তাদের গর্ভকালীন সময়ে যে স্বাস্থ্য সেবা পেয়ে থাকেন সে সম্পর্কে আমাকে বলুন ?

- Probe on any nutritional advice given to pregnant women
গর্ভবতী মহিলাদেরকে যে পুষ্টি পরামর্শ দেয়া হয় সে সম্পর্কে জানুন।
- Probe on if advice is followed
পরামর্শ অনুসরণ করা হয় কিনা সে সম্পর্কে জানুন।
- Probe on reasons why women may or may not follow advice
মহিলারা কেন পরামর্শ মেনে চলতে পারে বা পারে না তার কারন সম্পর্কে জানুন।
- Probe on health care seeking practices
গর্ভবতী মহিলারা এই এলাকায় কোথায় এবং কিভাবে স্বাস্থ্য সেবা নিয়ে থাকেন সে সম্পর্কে জানুন।

8. What barriers do women in this community face in staying healthy during pregnancy?

এই এলাকার গর্ভবতী মহিলারা গর্ভাবস্থায় সুস্থ থাকার জন্য কি কি বাঁধার সম্মুখীন হন ?

- Probe on community/family support
পারিবারিক/সামাজিক ভাবে কতটুকু সাহায্য পায় সে সম্পর্কে জানুন।
- Probe on access to care
স্বাস্থ্য সেবা কতটা সহজভাবে পাওয়া যায় সে সম্পর্কে জানুন।

Micronutrient Supplement

This is great information. Now I would like to hear your suggestions about developing a program that will introduce a micronutrient food supplement

এটি একটি খুব গুরুত্বপূর্ণ তথ্য। আমি এখন কিভাবে একটি প্রকল্পের মাধ্যমে পুষ্টি কনার সরবরাহ নিশ্চিত করা যায় সে বিষয়ে আপনার মতামত জানতে চাই।

9. Can you describe how a micronutrient supplement would help a woman stay healthy during her pregnancy?

আপনি কি বলতে পারেন, কিভাবে পুষ্টি কনা একজন গর্ভবতী মহিলাকে গর্ভকালীন সময়ে সুস্থ রাখতে সাহায্য করে ?

- Probe on illness prevention
রোগ প্রতিরোধ সম্পর্কে জানুন।

10. Can you describe similar products that pregnant women in this community use?

এই এলাকার অন্যান্য গর্ভবতী মহিলারা একই ধরনের যে সমস্ত পুষ্টি কনা ব্যবহার করেন সে সম্পর্কে বলতে পারবেন ?

- Probe on source of medications/ supplements
ওষুধ / পুষ্টি কনা কোথায় পাওয়া যায় সে সম্পর্কে জানুন।
- Probe on affordability
ক্রয় ক্ষমতা সম্পর্কে জানুন।
- Probe on sharing
ভাগ করে নেয়া সম্পর্কে জানুন।
- Probe on what makes them desirable

কোন কোন বিষয় গর্ভবতী মহিলাদের এই পুষ্টি কনা নির্বাচন/ পছন্দ করতে সাহায্য করে সে সম্পর্কে জানুন।

- Probe on products that are not desirable

কোন কোন কারণে পুষ্টি কনা গর্ভবতী মহিলাদের পছন্দ নয় সে সম্পর্কে জানুন।

- f. Probe on acceptability of micronutrient supplement
পুষ্টি কনার গ্রহন যোগ্যতা সম্পর্কে জানুন।
- g. Probe on perception of product
পুষ্টি কনা সম্পর্কে ধারণা/ মতামত জানুন।

11. Please describe the most effective way to market a micronutrient supplement in this community?

কিভাবে এই এলাকার গর্ভবতী মহিলাদের জন্য একটি পুষ্টি কনা আরো ভালোভাবে বাজারজাত করা যায় সে সম্পর্কে আপনি কি আমাকে বলতে পারেন ?

- a. Probe on trusted communication channels
প্রচারণার নির্ভরযোগ্য উপায় গুলো সম্পর্কে জানুন।
- b. Probe on distribution channels
পুষ্টি কনা কে কিভাবে বিতরণ করতে পারে সে সম্পর্কে জানুন।
- c. How can existing health system play the role in this regard?
প্রচলিত স্বাস্থ্য ব্যবস্থা কিভাবে এই এলাকায় পুষ্টি কনা সরবরাহের ক্ষেত্রে ভূমিকা রাখতে পারে?
- d. Probe on how to explain the micronutrient supplement to women
পুষ্টি কনা সম্পর্কে কিভাবে মহিলাদেরকে ব্যাখ্যা করবেন সে সম্পর্কে জানুন।
- e. Probe on best ways to ensure that the product is being used correctly
পুষ্টি কনা টি সঠিক ভাবে ব্যবহার হচ্ছে কিনা সেটা নিশ্চিত হওয়ার জন্য সে সম্পর্কে জানুন।

12. Thank you for your time. Is there anything else you would like to discuss that was not brought up?

আপনি যে আমাকে সময় দিয়েছেন এর জন্য আপনাকে ধন্যবাদ। আর এমন কিছু আছে যা সম্পর্কে এ পর্যন্ত বলা হয়নি কিন্তু আপনি বলতে চান ?

Form E: Focus Group

Demographic Information:

Data Collector Name (তথ্য সংগ্রহকারীর নাম): _____ Date (তারিখ) _____

Location (স্থান): _____ Number of participants (অংশগ্রহনকারীর সংখ্যা): _____

Introduction (ভূমিকা/পরিচিতিঃ)

Thank you for taking the time to speak with us today. We would like to hear your thoughts on micronutrient supplements and supplementation during pregnancy.

আমাদের সাথে কথা বলার জন্য ও সময় দেয়ার জন্য আপনাদেরকে ধন্যবাদ। গর্ভাবস্থায় পুষ্টি কনা খাওয়া সম্পর্কে আপনাদের ধারণা জানতে চাই।

1. To start, can everyone tell us a little about their family?

প্রথমেই, আপনারা কি আপনাদের পরিবার সম্পর্কে কিছুটা বলতে পারেন?

Antenatal Care: গর্ভকালীন সেবা:

2. We have heard that X are common challenges that women face during pregnancy. Can you tell us about your experience with this?

- Probe on challenges related to nutrition

আমরা শুনেছি গর্ভবতী মহিলারা গর্ভকালীন সেবা নেওয়ার ব্যাপারে কিছু (এক্স) প্রতিকূলতার মুখোমুখি হয়, আপনি কি এ বিষয়ে নিজের অভিজ্ঞতা সম্পর্কে বলতে পারেন?

- পুষ্টি সেবা নেওয়ার ক্ষেত্রে প্রতিকূলতা সম্পর্কে জানুন।

MMS Products:

3. Now let's discuss your experience with supplements during pregnancy. We have heard that many pregnant women in this community use X. Can you tell me why that is?

- Probe on what makes these products desirable
- Probe on products disliked by the community
- Probe on how these products are used
- Probe on how easy or difficult it is to use the supplements

এখন গর্ভাবস্থায় পুষ্টি কনা খাওয়ার অভিজ্ঞতা সম্পর্কে আলোচনা করব। আমরা শুনেছি এই এলাকার অনেক মহিলা X (এক্স) (যেমনঃ ...) ব্যবহার করেন, আপনারা কি বলতে পারেন কেন এটি আপনারা খান?

- এই পুষ্টি কনা গুলার প্রয়োজনীয়তা সম্পর্কে জানুন।
- এই এলাকার মহিলারা কোন কোন পুষ্টি কনা গুলো পছন্দ করেনা সেগুলো সম্পর্কে জানুন।

- পুষ্টি কনা গুলোর ব্যবহার সম্পর্কে জানুন।
- পুষ্টি কনাগুলোর ব্যবহার কতটা সহজ বা কঠিন সে সম্পর্কে জানুন।

4. Can you describe any barriers in getting or using these supplements?

- Probe on availability
- Probe on affordability

এই পুষ্টি কনা গুলো পেতে আপনারা কোন কোন বাধার সম্মুখীন হয়ে থাকেন তা কি বলতে পারবেন ?

- সহজলভ্যতা সম্পর্কে জানুন।
- ক্রয়ক্ষমতা সম্পর্কে জানুন।

5. We have heard that supplements can cause X. Can you please explain why that is?

আমরা শুনেছি পুষ্টি কনা খাওয়ার কারনে (এক্স) হতে পারে, আপনারা এটি ব্যাখ্যা করতে পারেন যে এটি কেন হয়?

MMS Promotion:

Now we would like to hear your thoughts on how these products should be promoted in this community.

এই এলাকায় কিভাবে এই পুষ্টি কনাগুলো প্রচার করা উচিত, সে সম্পর্কে আমরা আপনাদের চিন্তা ভাবনা জানতে চাই।

6. Can you describe what a product should look like to make it attractive to pregnant women?

- Probe on colors
- Probe on logo
- Probe on names
- Probe on colors, names and logos that should not be used

একটি পুষ্টি কনা দেখতে কেমন হলে একজন গর্ভবতী মহিলার কাছে আকর্ষণীয় হবে তা আপনারা বলতে পারেন ?

- রঙ সম্পর্কে জানুন।
- লোগো সম্পর্কে জানুন।
- নাম সম্পর্কে জানুন।
- কোন ধরনের রঙ, নাম এবং লোগো ব্যবহার করা উচিত নয় সে সম্পর্কে জানুন।

7. Can you tell us where this product should be promoted?

- Probe on where pregnant women often get health advice

আপনারা আমাকে বলতে পারেন যে কোথায় এই পুষ্টি কনা বিষয়ে প্রচার করা উচিত ?

- কোথা থেকে গর্ভবতী মহিলারা প্রায়ই স্বাস্থ্য বিষয়ক পরামর্শ পেয়ে থাকেন সে সম্পর্কে জানুন।

8. Can you tell us who this product should be marketed to?

- Probe on advertising to fathers
- Probe on differences in messaging depending on audience

আপনারা কি আমাকে বলতে পারেন যে পুষ্টি কনা বিষয়ে কার কাছে প্রচার করা উচিত ?

- পিতাদের কাছে প্রচার করা সম্পর্কে জানুন।
- শ্রোতাদের উপর নির্ভর করে বার্তা গুলোর পার্থক্য সম্পর্কে জানুন।

Form F: Market Observation

Demographic Information:

জনসংখ্যা বিষয়ক তথ্য:

Data Collector Name: _____


তথ্য সংগ্রহকারীর নাম:


Date: _____ Location: _____

তারিখ: _____ স্থান: _____

Market Observation Checklist:

বাজার পর্যবেক্ষণের তালিকা:

Section 1: Momvit বিভাগ ১- মোমভিট 	
1. Is momvit being sold in the community? মোমভিট কি এই এলাকায় বিক্রি হচ্ছে?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a হ্যাঁ না প্রযোজ্য নয়
2. Has momvit been sold in the community in the past? মোমভিট কি আগে এই এলাকায় বিক্রি হয়েছিলো?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a (skip to next section) হ্যাঁ না প্রযোজ্য নয় (পরবর্তী বিভাগে যান)
3. What unit of momvit is being sold? মোমভিটের কত ইউনিট বিক্রি হচ্ছে?	<input type="checkbox"/> packets of 60 tablets <input type="checkbox"/> single tablet other: _____ ৬০ টি ট্যাবলেটের একটি পাতা একটি ট্যাবলেট অন্যান্য
4. How much is momvit being sold for? মোমভিট কত টাকায় বিক্রি হচ্ছে?	_____ (list price of unit in local currency) (স্থানীয় টাকায় ইউনিটের মূল্য তালিকা)
Please pick a primary selling location: একটি প্রাথমিক বিক্রয় স্থান বাছাই করুন: 5. How many units of momvit does the store owner report selling in the past week? দোকানের মালিক গত সপ্তাহে কত ইউনিট মোমভিট বিক্রয়ের রিপোর্ট/বিবরণ দেন?	_____ units sold in the past week গত সপ্তাহে কত ইউনিট বিক্রি হয়েছে Location type: _____ (see options below) স্থানের ধরন (নীচের বিকল্প গুলো দেখুন)
6. Who does the store owner most frequently see purchasing momvit? দোকানের মালিক সবচেয়ে বেশী কাদেরকে মোমভিট কিনতে দেখতে পান?	<input type="checkbox"/> women <input type="checkbox"/> male other: _____ মহিলা পুরুষ আন্যান্য
7. What kind of location is selling momvit in this community? এই এলাকায় কোন ধরনের স্থানে মোমভিট বিক্রি করা হচ্ছে?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____ বাজার ছোট দোকান খানা ওষুধের দোকান অন্যান্য

8. How many total number of locations are selling Plumpy Sup momvit? মোট কতগুলো স্থানে Plumpy Sup মোমভিট বিক্রি হচ্ছে ?	_____ total locations মোট স্থান
9. How is momvit displayed in the store? দোকানে মোমভিট কীভাবে সাজিয়ে রাখা হয় ?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____ প্রযোজ্য নয় কাউন্টারের পেছনে অন্যান্য পণ্য গুলির সামনে রাখা হয় অন্যান্য
Section 2: Aristo Mom বিভাগ ২-অ্যারিস্টো মোম	
	
10. Is Aristo Mom being sold in the community? অ্যারিস্টো মোম কি এই এলাকায় বিক্রি হচ্ছে ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a হ্যাঁ না প্রযোজ্য নয়
11. Has Aristo Mom been sold in the community in the past? অ্যারিস্টো মোম কি আগে এই এলাকায় বিক্রি হয়েছিলো ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a (skip to next section) হ্যাঁ না প্রযোজ্য নয় (পরবর্তী বিভাগে যান)
12. What unit of Aristo Mom is being sold? অ্যারিস্টো মোম কত ইউনিটে বিক্রি হচ্ছে ?	<input type="checkbox"/> Blister packs of 10 <input type="checkbox"/> single tablet other: _____ ১০টি ট্যাবলেটের একটি পাতা একটি ট্যাবলেট অন্যান্য
13. How much is Aristo Mom being sold for? অ্যারিস্টো মোম কত টাকায় বিক্রি হচ্ছে ?	_____ (list price of one unit in local currency) (স্থানীয় টাকায় এক ইউনিটের মূল্য তালিকা)
Please pick a primary selling location: একটি প্রাথমিক বিক্রয় স্থান বাছাই করুন:	
14. How many units of Aristo Mom does the store owner report selling in the past week? দোকানের মালিক গত সপ্তাহে কত ইউনিট অ্যারিস্টো মোম বিক্রয়ের রিপোর্ট/বিবরণ দেন ?	_____ units sold in the past week গত সপ্তাহে কত ইউনিট বিক্রি হয়েছে Location type: _____ (see options below) স্থানের ধরন (নীচের বিকল্পগুলো দেখুন)
15. Who does the store owner most frequently see purchasing Aristo Mom? দোকানের মালিক সবচেয়ে বেশী কাদেরকে অ্যারিস্টো মোম কিনতে দেখতে পান ?	<input type="checkbox"/> women <input type="checkbox"/> male other: _____ মহিলা পুরুষ অন্যান্য
16. What kind of location is selling Aristo Mom in this community? এই এলাকায় কোন ধরনের স্থানে অ্যারিস্টো মোম বিক্রি করা হচ্ছে ?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____ বাজার ছোট দোকান থানা ওষুধের দোকান অন্যান্য
17. How many total number of locations are selling Aristo Mom? মোট কতগুলো স্থানে অ্যারিস্টো মোম বিক্রি হচ্ছে ?	_____ total locations মোট স্থান
18. How is the Aristo Mom displayed in the store? দোকানে অ্যারিস্টো মোম কীভাবে রাখা হয় ?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____ প্রযোজ্য নয় কাউন্টারের পেছনে অন্যান্য পণ্য গুলোর সামনে রাখা হয় অন্যান্য

Section 3: Nutrum PN/Gold Nutrum PN/ Gold

বিভাগ ৩- নিউট্রাম পিএন/ গোল্ড



19. Is Nutrum PN/Gold being sold in the community? নিউট্রাম পিএন/ গোল্ড কি এই এলাকায় বিক্রি হচ্ছে ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a হ্যাঁ না প্রযোজ্য নয়
20. Has Nutrum PN/Gold been sold in the community in the past? নিউট্রাম পিএন/ গোল্ড কি আগে এই এলাকায় বিক্রি হয়েছিলো ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a (skip to next section) হ্যাঁ না প্রযোজ্য নয় (পরবর্তী বিভাগে যান)
21. What unit of Nutrum PN/Gold is being sold? নিউট্রাম পিএন/ গোল্ড র কত ইউনিট বিক্রি হচ্ছে ?	<input type="checkbox"/> bottle of 30 tablets <input type="checkbox"/> single tablet Other: _____ ৩০টি ট্যাবলেট এর একটি বোতল একটি ট্যাবলেট অন্যান্য
22. How much is Nutrum PN/Gold being sold for? নিউট্রাম পিএন/ গোল্ড কত টাকায় বিক্রি হচ্ছে ?	_____ (list price of one unit in local currency) (স্থানীয় টাকায় এক ইউনিটের মূল্য তালিকা)
<i>Please pick a primary selling location:</i> <i>একটি প্রাথমিক বিক্রয় স্থান বাছাই করুন:</i> 23. How many units of Nutrum PN/Gold does the store owner report selling in the past week? দোকানের মালিক গত সপ্তাহে কত ইউনিট নিউট্রাম পিএন/ গোল্ড বিক্রয়ের রিপোর্ট/বিবরণ দেন ?	_____ units sold in the past week গত সপ্তাহে কত ইউনিট বিক্রি হয়েছে Location type: _____ (see options below) স্থানের ধরন (নীচের বিকল্পগুলো দেখুন)
24. Who does the store owner see most frequently purchasing Nutrum PN/Gold ? দোকানের মালিক সবচেয়ে বেশী কাদেরকে নিউট্রাম পিএন/ গোল্ড কিনতে দেখতে পান ?	<input type="checkbox"/> women <input type="checkbox"/> male other: _____ মহিলা পুরুষ অন্যান্য
25. What kind of location is selling Nutrum PN/Gold in this community? এই এলাকায় কোন ধরনের স্থানে নিউট্রাম পিএন/ গোল্ড বিক্রি করা হচ্ছে ?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____ বাজার ছোট দোকান খানা ওষুধের দোকান অন্যান্য
26. How many total number of locations are selling Nutrum PN/Gold ? মোট কতগুলো স্থানে নিউট্রাম পিএন/ গোল্ড বিক্রি হচ্ছে ?	_____ total locations মোট স্থান
27. How is the Nutrum PN/Gold displayed in the store? দোকানে নিউট্রাম পিএন/ গোল্ড কিভাবে রাখা হয় ?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____ প্রযোজ্য নয় কাউন্টারের পেছনে অন্যান্য পণ্য গুলোর সামনে অন্যান্য

Section 4: Precare

বিভাগ ৪- প্রিকেরারপ্রিকেরার



28. Is Precare being sold in the community? প্রিকেরার কি এই এলাকায় বিক্রি হচ্ছে ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a হ্যাঁ না প্রযোজ্য নয়
29. Has Precare been sold in the community in the past? প্রিকেরার কি আগে এই এলাকায় বিক্রি হয়েছিলো ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a (skip to next section) হ্যাঁ না প্রযোজ্য নয় (পরবর্তী বিভাগে যান)
30. What unit of Precare being sold? প্রিকেরারর কত ইউনিট বিক্রি হচ্ছে ?	<input type="checkbox"/> bottle of 30 tablets <input type="checkbox"/> single tablet Other: _____ ৩০টি ট্যাবলেট এর একটি বোতল একটি ট্যাবলেট অন্যান্য
31. How much one unit of Precare being sold for? এক ইউনিট প্রিকেরার কত টাকায় বিক্রি হচ্ছে ?	_____ (list price of one unit in local currency) (স্থানীয় টাকায় এক ইউনিটের মূল্য তালিকা)
Please pick a primary selling location: একটি প্রাথমিক বিক্রয় স্থান বাছাই করুন: 32. How many units of Precare does the store owner report selling in the past week? দোকানের মালিক গত সপ্তাহে কত ইউনিট প্রিকেরার বিক্রয় এর রিপোর্ট/বিবরণ দেন ?	_____ units sold in the past week গত সপ্তাহে কত ইউনিট বিক্রি হয়েছে Location type: _____ (see options below) স্থানের ধরন: _____ (নীচের বিকল্প গুলো দেখুন)
Who does the store owner most frequently see purchasing Precare? দোকানের মালিক সবচেয়ে বেশি কাদেরকে প্রিকেরার কিনতে দেখতে পান ?	<input type="checkbox"/> women <input type="checkbox"/> male other: _____ মহিলা পুরুষ অন্যান্য
33. What kind of location is selling Precare in this community? এই এলাকার কোন ধরনের স্থানে প্রিকেরার বিক্রি করা হচ্ছে ?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____ বাজার ছোট দোকান খানা ওষুধের দোকান অন্যান্য
34. How many total number of locations are selling Precare? মোট কতগুলো স্থানে প্রিকেরার বিক্রি হচ্ছে ?	_____ total locations মোট স্থান
35. How is the Precare displayed in the store? দোকানে প্রিকেরার কিভাবে রাখা হয় ?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____ প্রযোজ্য নয় কাউন্টারের পেছনে অন্যান্য পণ্য গুলোর সামনে অন্যান্য

Section 5: Multivit Plus

বিভাগ ৫- মাল্টিভিট প্লাস



36. Is Multivit Plus being sold in the community? মাল্টিভিট প্লাস কি এই এলাকায় বিক্রি হচ্ছে ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a হ্যাঁ না প্রযোজ্য নয়
37. Has Multivit Plus been sold in the community in the past? মাল্টিভিট প্লাস কি আগে এই এলাকায় বিক্রি হয়েছিলো ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a (skip to next section) হ্যাঁ না প্রযোজ্য নয় (পরবর্তী বিভাগে যান)
38. What unit of Multivit Plus being sold? মাল্টিভিট প্লাস এর কত ইউনিট বিক্রি হচ্ছে ?	<input type="checkbox"/> box of 30 tablets <input type="checkbox"/> single tablet Other: _____ ৩০টি ট্যাবলেটের একটি বাক্স একটি ট্যাবলেট অন্যান্য
39. How much one unit of Multivit Plus being sold for? এক ইউনিট মাল্টিভিট প্লাস কত টাকায় বিক্রি হচ্ছে ?	_____ (list price of one unit in local currency) (স্থানীয় টাকায় এক ইউনিটের মূল্য তালিকা)
Please pick a primary selling location: একটি প্রাথমিক বিক্রয় স্থান বাছাই করুন: 40. How many units of Multivit Plus does the store owner report selling in the past week? দোকানের মালিক গত সপ্তাহে কত ইউনিট মাল্টিভিট প্লাস বিক্রয়ের রিপোর্ট/বিবরণ দেন ?	_____ units sold in the past week গত সপ্তাহে কত ইউনিট বিক্রি হয়েছে Location type: _____ (see options below) স্থানের ধরন (নীচের বিকল্প গুলো দেখুন)
41. Who does the store owner most frequently see purchasing Square? দোকানের মালিক সবচেয়ে বেশী কাদেরকে মাল্টিভিট প্লাস কিনতে দেখতে পান ?	<input type="checkbox"/> women <input type="checkbox"/> male other: _____ মহিলা পুরুষ অন্যান্য
42. What kind of location is selling Multivit Plus in this community? এই এলাকায় কোন ধরনের স্থানে মাল্টিভিট প্লাস বিক্রি করা হচ্ছে ?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____ বাজার ছোট দোকান খানা ওষুধের দোকান অন্যান্য
43. How many total number of locations are selling Square? মোট কতগুলো স্থানে মাল্টিভিট প্লাস বিক্রি হচ্ছে ?	_____ total locations মোট স্থান
44. How is Multivit Plus displayed in the store? দোকানে মাল্টিভিট প্লাস কিভাবে রাখা হয় ?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____ প্রযোজ্য নয় কাউন্টারের পেছনে অন্যান্য পণ্য গুলোর সামনে অন্যান্য

Section 6: Natal-16

বিভাগ ৬- ন্যাটাল-১৬



45. Is Natal-16 being sold in the community? ন্যাটাল-১৬ কি এই এলাকায় বিক্রি হচ্ছে ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a হ্যাঁ না প্রযোজ্য নয়
46. Has Natal-16 been sold in the community in the past? ন্যাটাল-১৬ কি আগে এই এলাকায় বিক্রি হয়েছিলো ?	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a (skip to next section) হ্যাঁ না প্রযোজ্য নয় (পরবর্তী বিভাগে যান)
47. What unit of Natal-16 being sold? ন্যাটাল-১৬কত ইউনিট বিক্রি হচ্ছে ?	<input type="checkbox"/> box of 30 tablets <input type="checkbox"/> single tablet Other: _____ ৩০টি ট্যাবলেট এর একটি বাক্স একটি ট্যাবলেট অন্যান্য
48. How much one unit of Natal-16 being sold for? এক ইউনিট ন্যাটাল-১৬ কত টাকায় বিক্রি হচ্ছে ?	_____ (list price of one unit in local currency) (স্থানীয় টাকায় এক ইউনিটের মূল্য তালিকা)
<i>Please pick a primary selling location:</i> <i>একটি প্রাথমিক বিক্রয় স্থান বাছাই করুন:</i> 49. How many units of Natal-16 does the store owner report selling in the past week? দোকানের মালিক গত সপ্তাহে কত ইউনিট ন্যাটাল-১৬ বিক্রয়ের রিপোর্ট/বিবরণ দেন ?	_____ units sold in the past week গত সপ্তাহে কত ইউনিট বিক্রি হয়েছে Location type: _____ (see options below) স্থানের ধরন (নীচের বিকল্প গুলো দেখুন)
50. Who does the store owner most frequently see purchasing Natal-16? দোকানের মালিক সবচেয়ে বেশী কাদেরকে ন্যাটাল-১৬ কিনতে দেখতে পান ?	<input type="checkbox"/> women <input type="checkbox"/> male other: _____ মহিলা পুরুষ অন্যান্য
51. What kind of location is selling Natal-16 in this community? এই এলাকায় কোন ধরনের স্থানে ন্যাটাল-১৬ বিক্রি করা হচ্ছে ?	<input type="checkbox"/> market stand <input type="checkbox"/> small store <input type="checkbox"/> household <input type="checkbox"/> pharmacy <input type="checkbox"/> other: _____ বাজার ছোট দোকান খানা ঔষুধের দোকান অন্যান্য
52. How many total number of locations are selling Natal-16? মোট কতগুলো স্থানে ন্যাটাল-১৬বিক্রি হচ্ছে ?	_____ total locations মোট স্থান
53. How is Natal-16 displayed in the store? দোকানে ন্যাটাল-১৬ কিভাবে রাখা হয় ?	<input type="checkbox"/> n/a <input type="checkbox"/> behind counter <input type="checkbox"/> displayed in front of other products <input type="checkbox"/> other: _____ প্রযোজ্য নয় কাউন্টারের পেছনে অন্যান্য পণ্য গুলোর সামনে রাখা হয় অন্যান্য

Form G: Participatory Workshop - Branding

Demographic Information:

Data Collector Name (তথ্য সংগ্রহকারীর নাম): _____ Date (তারিখ): _____

Location (স্থান): _____ Number of participants (অংশগ্রহণকারীর সংখ্যা): _____

Introduction: We would like to hear your suggestions on developing a brand for a micronutrient supplement specifically for pregnant women. Please express your ideas freely; there are no right or wrong answers. We will be asking you a series of questions and will vote on your responses.

গর্ভবতী নারীদের জন্য যে পুষ্টি কণা দেওয়া হবে তার ব্যাভিৎ সমপর্কে আপনাদের মতামত আমরা জানতে চাচ্ছি। অনুগ্রহ করে খোলাখুলি ভাবে আপনাদের মতামত দিন, এই ক্ষেত্রে কোন ভুল অথবা কোন সঠিক উত্তর বলে কিছু নেই। আমরা আপনাদের বেশ কিছু প্রশ্ন করবো এবং আপনাদের প্রদত্ত উত্তরের ওপর ভিত্তি করে আমরা ঐক্যমতে পৌছাবো।

Branding: Discuss common brands in the community focusing on colors, names, logos and slogans. Use brands like sports teams as examples.

রঙ, নাম, লোগো এবং স্লোগানের ওপর ভিত্তি করে এলাকাতে পরিচিত কিছু ব্যান্ড সমপর্কে আলোচনা করুন। উদাহরণ হিসেবে খেলার বিভিন্ন দল কে উল্লেখ করুন।

Question 1: To start we would like you to tell us what challenges regarding nutrition that pregnant women in this community face. Let's vote on the foremost challenges.

- You will have 5 votes to use. You can use all your votes on one challenge or split them up.

শুরুতে আপনারা আমাদের বলুন এই এলাকার গর্ভবতী মহিলারা পুষ্টি বিষয়ক কি কি চ্যালেঞ্জ/ বাঁধার সম্মুখীন হয়ে থাকেন? প্রথম সারির বাধাগুলোকে ভোট দেই।

- আপনারা ৫টি করে ভোট দিতে পারবেন। আপনারা চাইলে সবগুলো ভোট যেকোনো একটি চ্যালেঞ্জ/ বাঁধার পক্ষে দিতে পারবেন অথবা ভাগ করে একের অধিক চ্যালেঞ্জ/ বাঁধার পক্ষে দিতে পারবেন

Question 2: Now, we would like to discuss how a micronutrient supplement should look to make it attractive to pregnant women in this community. We will be asking for your ideas for the color, name, logo and slogan for this product. Let's start with color. Please brainstorm a color scheme that you think would suit a product like this.

- Let's vote on the color schemes. You have 5 votes and can use all 5 on one idea or split them up.

একটি পুষ্টি কণা কে এলাকার একজন গর্ভবতী মহিলার কাছে আকর্ষণীয় করে তুলতে হলে দেখতে কেমন হওয়া উচিত এই সম্পর্কে এখন আমরা আপনাদের সাথে আলোচনা করতে চাই। আমরা আপনাদের এই পুষ্টি কণাটির রঙ, নাম, লোগো এবং স্লোগান নিয়ে

আপনাদের ধারণার ব্যাপারে প্রশ্ন করবো। প্রথমে রঙ নিয়ে শুরু করি। অনুগ্রহ করে নিজেদের মাঝে আলোচনা করে বের করুন এরকম একটি পুষ্টি কণার রঙ কেমন হওয়া উচিত?

- রঙ এর ওপর আমরা ভোট দেই। আপনাদের ৫টি ভোট আছে, আপনারা চাইলে সবগুলো ভোট একটি রঙ এর পক্ষে দিতে পারেন অথবা আলাদা ভাবে ভাগ করে দিতে পারেন।

Question 3: Next, we would like you to think about a good name for a product like this. The name can be one, two or three words

- Let's vote on the names. You have 5 votes and can use all 5 on one idea or split them up.

এরপর এই পুষ্টি কণার জন্যে একটি ভাল নাম চিন্তা করতে আপনাদের অনুরোধ করছি। এই নামটি এক, দুই অথবা তিন শব্দের মাঝে হতে পারে।

- এখন নামের পক্ষে ভোট দেই। আপনাদের ৫টি ভোট আছে, আপনারা চাইলে সবগুলো ভোট একটি নাম এর পক্ষে দিতে পারেন অথবা আলাদা ভাবে ভাগ করে দিতে পারেন।

Question 4: Now, let's think about a good slogan to represent this product. The slogan could be a short phrase that is memorable.

- Let's vote on the slogans. You have 5 votes and can use all 5 on one idea or split them up.

এখন এই পুষ্টি কণাকে উপস্থাপন করার জন্যে ভাল স্লোগান এর ব্যাপারে চিন্তা করুন। স্লোগানটি ছোট বাক্যের হতে পারে যেটা সহজে মনে রাখা যায়।

- স্লোগানের ওপর এখন ভোট দেই। আপনাদের ৫টি ভোট আছে, আপনারা চাইলে সবগুলো ভোট একটি স্লোগানের পক্ষে দিতে পারেন অথবা আলাদা ভাবে ভাগ করে দিতে পারেন।

Question 5: Now, let's discuss what a good logo would look like. The logo could be a simple picture that represents the name and the slogan of the product.

Let's vote on the logo ideas. You have 5 votes and can use all 5 on one idea or split them up.

এখন, এই পুষ্টি কণার জন্যে একটা ভাল লোগো নিয়ে আলোচনা করা যাক। লোগোটি সাধারণ একটি ছবি হতে পারে যাতে পুষ্টি কণাটির নাম এবং স্লোগান দুটোই থাকবে।

- লোগোর ধারণার ওপর ভোট দেওয়া যাক। আপনারা চাইলে সবগুলো ভোট একটি লোগোর পক্ষে দিতে পারেন অথবা আলাদা ভাবে ভাগ করে দিতে পারেন।

Thank you for your participation. Does anyone have any additional questions or comments?

আপনাদের সকলকে অংশগ্রহণের জন্যে ধন্যবাদ। কারও কোনো প্রশ্ন/ মতামত/ কमेंট থাকলে করতে পারেন।

