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THE JEEVIKA MULTISECTORAL CONVERGENCE PILOT IN BIHAR

A PROCESS EVALUATION REPORT

October 2017

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Acknowledgments

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Contents

List of Tables

List of Figures

Acronyms

AC	Area Coordinator
ANC	Antenatal care
ANM	Auxiliary Nurse midwife
ASHA	Accredited Social Health Activist
AWC	Anganwadi Center
AWW	Anganwadi Worker
BCC	Behavior Change Communication
BHSNI	Block Health Sanitation and Nutrition Integrator
BMI	Body Mass Index
BPM	Block Program Manager
CAPI	Computer Assisted Program Interface
CC	Community Coordinator
CLF	Cluster Level Federation
CM	Community Mobilizer
CNRP	Community Nutrition Resource Person
CRP	Community Resource Person
DHS	District Health Society
DPM	District Project Manager
DQA	Data Quality Assessment
FLW	Frontline Worker
FSC	Food Security Committee
FSF	Food Security Fund
GP	Gram Panchayat
H&N	Health and nutrition
HH	Household
HRF	Health Risk Fund
HSC	Health sub committee
IFA	Iron Folic Acid
IFPRI	International Food Policy Research Institute
IYCF	Infant and Young child feeding
JEEViKA-MC	JEEViKA Multisectoral Convergence
JSSK	Janani Shishu Suraksha Karyakram
JSY	Janani Suraksha Yojana
JTSP	JEEViKA Technical Support Program
LHS	Livelihoods Specialist
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee
MIS	Management Information System
MT	Master Trainer
NCRP	Nutrition Community Resource Person
NHM	National Health Mission
ODF	Open defecation free
ORS	Oral rehydration salts
PC	Procurement committee
PDS	Public distribution system

PE	Process evaluation
PHC	Primary healthcare center
PIP	Program impact pathway
PM	Project Manager
SHAN	Sanitation, Health and Nutrition
SHG	Self-help group
SPMU	State Project Management Unit
THR	Take home ration
TSC	Total Sanitation Campaign
VHSND	Village Health Sanitation and Nutrition Day
VO	Village Organization
VRP	Village Resource Person
WASH	Water, Sanitation and Hygiene
WB	World Bank
WHO	World Health Organization

Executive Summary

This document lays out the objectives, approach, and methods to be used for the process evaluation (PE) in the JEEViKA-Multisectoral Convergence (JEEViKA-MC) pilot, and presents the results of the PE that was conducted from April to June 2017. The main objective of a PE is to provide answers to the questions of *how* and *why* a program did or did not have impact. Therefore, a PE forms an important component of an overall evaluation plan, and it is critical to opening the "black box" of programs and illuminating the processes by which programs achieve their impact, or not. A PE should be theory-driven, to enable all stakeholders in an evaluation to understand what aspects of program implementation or utilization were instrumental to program success or failure. A PE is particularly important to implement with rigor in evaluations of complex interventions.

In the context of this program, five broad domains pertaining to each of the specific program impact pathways were identified. These include: implementation platforms, training and awareness of roles, implementation processes, exposure of SHG households to key messages, and utilization of the intervention. The PE seeks to explain **five broad questions** that map to each of these domains, which are as follows:

1. Are critical intervention platforms for the behavior change communication (e.g., self-help groups (SHGs), and Village Organizations (VOs)) and convergence (e.g., convergence committees, Annaprashan Diwas and Bachpan Diwas) in place and functional?
2. Do all key actors know their roles, responsibilities, and relationships, as they pertain to the goals of the program, and do all key actors possess necessary content knowledge to execute their roles effectively?
3. What factors affect the delivery of the multiple intervention components?
    a. What factors affect the behavior change communication(BCC) messages related to health and nutrition, kitchen gardens (e.g., facilitators and barriers to Community Mobilizers (CMs) delivering content, SHGs demanding services, etc.)?
    b. What factors affect whether and how key players (e.g., SHG members, VO members, Village Resource Persons (VRPs), etc.) take requisite sector-specific actions following the BCC content delivery?
    c. What factors affect the functioning of the coordination committees and actions of key players to ensure demand for and utilization of health and nutrition services?
4. To what extent are all the women in the 1,000-day window receiving critical messages and critical services related to health and nutrition (e.g., dietary diversity, kitchen gardens, sanitation, funds, etc.)?
5. What factors affect trial and adoption of the key actions by the client populations (e.g., dietary diversity, setting up of kitchen gardens, infant and young child feeding (IYCF) practices, etc.)?

Approach to the process evaluation

- All research questions, protocols, and data collection instruments were informed by the program impact pathways, and the key actors identified along those impact pathways, for the JEEViKA interventions included in the pilot.
- The sample for PE was drawn from the impact evaluation sample and was from both treatment and control groups. Within the selected sample, we interviewed JEEViKA staff, VO committees including the Procurement committee (PC), CMs and other government frontline workers, SHGs, and households.
- Mixed methods were used to collect data to inform the research questions. Mini quantitative surveys were conducted to understand the awareness and knowledge of health and nutrition information and related services as well as trial and adoption of practices. Semi-structured focused interviews were used to understand the factors and mechanisms facilitating or limiting

the implementation, exposure, and use of the JEEViKA-MC platform. We also observed SHG meetings and recorded the proceedings.

- This process evaluation plan was discussed with the implementation team in January 2017, and was updated based on those discussions. The final document was shared with the implementers in March 2017.

Design

- There are two main components of the JEEViKA-MC pilot – behavior change communication, and strengthening convergence and coordination.
- Under the first component, the CM was designated as the main cadre responsible for the delivery of health and nutrition behavior change communication to the SHGs. The Health Sub-Committee (HSC) was recently constituted to assist with this role.
- Under the second component, convergence committees were to be set up or strengthened at the panchayat, block and district levels. The HSC conducts home visits and increases awareness of the community events.
- There were several updates to the intervention between the time of writing the protocol, and the rollout of the PE survey.
    - Some of the changes that affected the PE design include delays in training and use of the HSC and the recognition that the Food Security committee (FSC) was not a standing committee – both resulted in the surveys for these actors not being administered at the time of the PE.
    - Other changes included increased coverage of the Sanitation, Health and Nutrition (SHAN) fund, introduction of new cadres, new modalities for delivering messages to the community, and the change in the District Project Manager (DPM).

Data collection

- For the purpose of the process evaluation, six Gram Panchayats (GPs) were selected for the process evaluation, three from the treatment arm (Ajgaiba, Mokma and Pama), and three from the control (Saur Bazaar, Baraith, Dhabauli South).
- IFPRI partnered with DCOR Consulting Pvt Ltd (DCOR) for the collection of data for the process evaluation.
- IFPRI and DCOR conducted two rounds of pre-testing of tools –Phase I on 12th and 13th April 2017, and Phase II from 4th to 6th May, 2017. The pre-tests were aimed at capturing the amount of time taken by each tool, the translation and use of local terms, and the ease with which respondents understood the questions as phrased. After the pre-tests the tools were revised based on the feedback provided by the teams.
- DCOR was responsible for locating and contacting potential enumerators and managing the training logistics. Intensive classroom and field training of both the quantitative and qualitative study teams was undertaken (in parallel sessions) from May 8th to 18th, 2017. The finalization of the study teams was based on the enumerator performance during the training. In total, a team of 22 persons was engaged for the data collection, and were divided into two sub-teams for the quantitative and qualitative data collection and operated under the close supervision of the study coordinator and the logistics manager.
- Data collection began immediately after the training ended. Spot-checks and back-checks were conducted in a timely manner and reports were shared with the IFPRI team by DCOR on a bi-weekly basis. In addition, for qualitative data collection audio files and scanned copy of the field notes were shared with the IFPRI for review and timely feedback.
- The achieved household sample was slightly over 90 percent of the targeted sample. The main reasons for attrition of households were: returning to parental home, migration in search of work, and, some households could not be traced.

- Targeted samples were achieved for the PCs, VO executive committees and the Anganwadi workers (AWWs). The reasons for not achieving the target samples for the other respondents were: resignations from position, no one currently appointed to position, and one frontline worker (FLW) working across multiple villages.
- The IFPRI team also conducted interviews with JEEViKA staff from the state-level downwards, and with select JEEViKA Technical Support Program (JTSP) staff. Verbal consent was taken from each respondent prior to interviewing them. The interviews were also recorded on voice recorders with the full knowledge and consent of the interviewee.
- Quantitative data was entered into a computer assisted program interface and the datasets were shared with IFPRI. The IFPRI team undertook cleaning and checking of the data and any discrepancies were resolved. All the quantitative data was cleaned and analyzed in STATA 14. The open-ended responses, SHG observations and the qualitative interviews were entered into word documents by the DCOR team. The IFPRI team translated, analyzed and summarized these data.

Enabling environment for implementation

- The feasibility study carried out from March 2014 to December 2015 was not completely applicable to the MC pilot due to changes in focus around messages and the implementation modality - shift from a dedicated cadre of the JEEViKA Saheli to an existing cadre, that of the CM, and, creation of a completely new committee, the HSC, to relieve the workload pressure from the CM.
- There was delayed implementation of some activities that were included as part of the pilot. For example, the formation of convergence committees and activation of community events occurred in a staggered manner due to delays in the execution of official orders.
- Many of the higher-level staff received formal health and nutrition training only 8-9 months into the implementation, which may have affected their ability to monitor the BCC activities, and their engagement with the pilot.
- The HSC's first training on their roles and responsibilities was delayed, as was the hiring and training of the Nutrition Community Resource Persons (NCRPs). This subsequently led to delay in some components of the program, such as home visits and active participation of the HSC in Integrated Child Development Services (ICDS) events.
- Among JEEViKA and JTSP staff, knowledge of the purpose of the pilot, its target population, and the activities proposed is reasonably good. The Block Program Managers (BPMs), Area Coordinators (ACs) and Community Coordinators (CCs) seemed very aware of the BCC component of the MC pilot. However, their knowledge of the convergence and coordination component is quite poor. Among the Livelihood Specialists (LHS) interviewed, knowledge about the MC pilot seemed incomplete.
- The activities under the MC pilot are only one component of the multiple tasks of the JEEViKA staff at all levels. Their performance is not reviewed on the basis of the outcomes of activities specific to the pilot which reduces their incentive to work on those activities.
- At the time of conducting interviews, staff scarcity due to resignations and lags in filling those positions was noticed in some blocks. The limited staff presence directly affects implementation of such an intricate program which requires constant field support.
- The responsibilities of the CM have been steadily increasing. CMs now conduct a range of activities in addition to their role as bookkeepers and disseminators of health and nutrition (H&N) information. Almost all CMs in both arms responded that their workload had increased in the past one year.
- The training of the HSC is meant to reduce the burden of the CMs, as they are expected to take on tasks that would otherwise have been delegated to the CM, such as home visits, engagement

with community members in ICDS events, among other tasks. But low levels of literacy and lack of incentives are expected to hamper the effectiveness of this committee.

- Several training related issues were raised, e.g. the distance CMs have to travel to attend, distractions during the SHG meetings, and space constraints that limit activities that can be conducted. Residential trainings were suggested.
- A comparison of the BCC content under the pilot and the World Health Organization (WHO) modules and Accredited Social Health Activist (ASHA) training manuals found that there was considerable overlap in content, meaning that households in the control arm could be receiving these messages from multiple sources. This could dilute the impacts of the intervention.
- SHGs and VOs have been formed and are functional. About 68 percent of our sample belonged to an SHG. Almost all SHGs had savings and credit activities and almost all members participated in those activities.
- PCs were in place and functional in both treatment and control arms. In the treatment arm, most of the procurement was of food grains, though seeds have been procured a few times. In the control arms the members were aware of their roles and committees seemed to be in place but there was little evidence of procurement of food items. Awareness of the rules of repayment of money was good in both arms.
- Slightly less than half the respondents had heard of the Annaprashan Diwas, and 32.2 percent had heard of the Bachpan Diwas. However, a large proportion did not know how many times the event had been held in the last three months, and did not know who participated in these events. Participation in these events was very low.
- Awareness of community events among the CMs was quite high. 9 out of 14 CMs in the treatment arms had heard of Annaprashan Diwas, compared to only 3 out of 12 in the control arms. In the control arm knowledge among the CM of frequency of these events and services provided was also quite poor as compared to treatment arm.
- Comparing the household and CM awareness of these community events, we can infer that some services are indeed being provided, but that the events may not be being held at the intended frequency, and that there is variability in CM and household reports of services available.

Staff knowledge of roles and responsibilities

- The CMs in both the treatment and control arms have completed 11 years of education, on average, and have been in office for an average of 30.8 months. Treatment arm CMs reported spending a greater number of hours per day working. The most time-consuming task, across arms, is facilitating SHG meetings.
- Training on roles and responsibilities of the CM was conducted in both arms and was perceived by the CM as sufficient. The need for more training on book-keeping and other lending related aspects was expressed.
- Training on health and nutrition behavior change communication messages has happened only in the treatment arm. The topics covered in the training, as indicated by the CM, include maternal and child nutrition, antenatal care (ANC), complications in pregnancy, and newborn care. However, no specific training on use of Food Security Fund (FSF), Health Risk Fund (HRF) or kitchen gardens was received in the last twelve months.
- Knowledge of their roles and responsibilities among the CMs is good in both arms. Most CMs noted that facilitating SHG meetings, attending VO meetings, book-keeping, facilitating use of the HRF, and providing information on health and nutrition (treatment arm only) were their responsibilities. However, their understanding of their role in coordinating with AWW and community events was relatively weaker.
- Most VRPs were aware of their responsibilities, and reported visiting households to check progress on kitchen gardens, discussing cultivation under monetary and space constraints, and

attending VO meetings to discuss kitchen garden implementation. In addition to this, majority of the VRPs were also involved in discussing agricultural techniques and livelihoods. About half of the VRPs indicated the need for more training. These findings were similar across arms.

- Most VRPs were aware of the CM in their area and met with them multiple times a month. The topic of discussion typically is giving SHG members advice on kitchen gardens and micro-planning of input seeds.
- CCs and ACs are aware of their roles in the MC pilot. Some gaps in training were identified. For example, among the CCs it was discovered that the training happened much after the pilot began and the ACs expressed the need to be trained on the same modules on which the CM received training, in order to monitor them better.
- There is also role clarity among the BPMs but their training on health and nutrition was significantly delayed, which may have affected their ability to monitor progress and their ownership of the pilot.
- All LHS were oriented about their activities within JEEViKA. Two out of the three respondents mentioned having received training on small kitchen gardens, health and nutrition or how to link livelihoods with the same. One of them felt that they needed more training on health and nutrition.
- The Master Trainers are aware of their duties of training the CMs and monitoring their performance in SHG meetings. They give feedback to the CMs to help them improve their dissemination. They also participate in or conduct a Panchayat level review meeting where the CMs' problems are addressed.
- The Block Health Sanitation and Nutrition Integrators (BHSNIs) work with the Master Trainers on training CMs. The BHSNI also play a role in community events such as Annaprashan and Bachpan Diwas where they have to monitor the participation of pregnant and lactating women. The BHSNIs also mentioned their participation in the block level convergence committees.

Component 1: Behavior change communication

- In about 65 percent of the SHG meetings observed as part of the process evaluation, health and nutrition topics were discussed. The topics of discussion were dietary diversity, pregnancy and new-born care, breastfeeding, and complementary feeding, and these correspond to the topics on which the CMs received training most recently.
- Nearly all the CMs in the treatment areas reported disseminating the information to SHGs within one week of receiving the training. Only a few CMs reported using picture cards, games and flipcharts while disseminating the information. Several CMs report that the topic of food and dietary diversity generated the most interest among the SHG members, followed by birth preparedness and new-born care, and antenatal care, pregnancy and breastfeeding. However, overall, there were no links made between the information disseminated and the resources available to be able to implement the suggestions.
- Impediments to dissemination of nutrition information include CMs' lack of knowledge, their inability to communicate the messages well, routine SHG meetings not taking place (especially during harvest season), nutrition information dissemination not being a priority during these meetings, or lack of interest among the women.
- When responses of the CMs were compared on questions on health and nutrition with their responses in the Baseline, it was observed that the knowledge of iron folic acid (IFA) consumption has increased and a greater number of CMs are aware about how to be prepared for delivery. But knowledge of sanitation and hygiene has deteriorated on topics like disposal of child's stool and handwashing. There has been a decline in knowledge in giving colostrum to the child and some ANC services.

- Awareness of the HRF among the VO executive members and the CMs of both the treatment and control arms is high. Nearly all the CMs were aware of the process of requesting the HRF and CMs in the treatment arm facilitated uptake of HRF by the SHG members.
- Awareness of the FSF is similar across arms among the key cadres and committees involved in facilitating its use. Most of the PC members, who are responsible for coordinating the purchase of food, were aware of their responsibilities but only a few knew of the FSF. In both arms some PC members said they prioritized the poorest of the poor in making their decision about the types of food items to purchase.
- Most CMs across both arms knew their role of developing microplans and presenting demand for the commodities to the VO. A majority of the CMs across arms noted prioritizing the FSF for the poorest of the poor members. In addition, a few CMs in the treatment arm reported prioritizing women in the 1000-day window, which is a focus emphasized in the treatment arm.
- The CMs and VRPs play a critical role in the promotion and setting-up of the kitchen gardens. Both these cadres report similar level of involvement in the treatment and control arms. Majority of the CMs in the treatment arm mentioned that they suggest different planting techniques to grow vegetables in limited space and visit gardens of SHG members. Compared to CMs in the treatment arm, fewer CMs in the control arm confirmed that SHG members associated with them have set up kitchen gardens.
- Majority of the VRPs in the treatment and control areas reported informing SHG members about the benefits, implementation and micro-planning of kitchen gardens. Almost all the VRPs said that they assisted with the setting up and follow-up of the kitchen gardens by providing technical advice on planting, weeding and so on.
- LHS reported that Kisaan Salaahkars and Krishi Samanvayaks inputs and knowledge will be helpful for setting up and maintaining kitchen gardens, but they mainly work with large farm holders and with the men in the community. However, the LHS works with the Block Agricultural Officer (BAP) to keep them informed about the activities and to seek support from the Kisaan Salaahkars and Samanvayaks and they also connect the VRPs to these agriculture extension workers.

Component 2: Convergence and coordination

- Though the CMs were aware of the existence of the FLWs and that they worked with women and children in the 1000-day window, their awareness of the exact roles of each FLW was poor. Often, they thought tasks assigned to one FLW were in fact the responsibility of the other.
- Awareness of the CM and her roles was higher among the ASHA and AWW, perhaps because some of them were SHG members themselves (or had family members who were).
- Coordination between the CMs and ASHAs was poor, with more than half the ASHAs reporting that they did not assist the CM in her duties, and in turn did not receive any assistance from her in performing their own.
- Coordination between the AWWs and the CMs was slightly better, with several AWWs mentioning that the CM provides assistance at the Village Health Sanitation and Nutrition Day (VHSND), and informs SHG women about the benefits of immunization.
- Overall, there is not much evidence of coordination between these FLWs and the CMs, despite the considerable degree of overlap in their target populations and the information they provide.
- Awareness of the district level convergence committees was high among the district-level JEEViKA staff and the committees were formed more than a year prior to the interview. However, the meetings do not take place regularly, either due to coordination issues or resistance from other departments to participate.
- Among the JEEViKA staff at the block level, there was clarity around the existence and purpose of these block level convergence committees. However, issues around their functioning were raised.

- Awareness of the existence, composition and role of the GP level convergence committees among the JEEViKA staff was high. Issues around the scheduling, though not as severe as they are at higher levels, continue to remain a problem even at the GP level.
- In contrast to the JEEViKA staff, ASHA and AWW awareness of the GP level coordination committee was quite low, even though they are meant to be part of the GP level coordination committees.

Exposure to information

- About 68% of the women interviewed as part of the household survey were part of an SHG. This proportion did not differ across treatment and control arms. Individuals in the control arm had, on average, been part of the SHG for slightly longer. 98 percent of the respondents reported that their SHG had savings and credit activities. Water, Sanitation and Hygiene (WASH) topics were reported as being discussed by about 60% of the respondents.
- Among the women who were not members of an SHG, the main reason cited for not being a member was that another household member was already active or that they were not interested.
- Awareness of JEEViKA was low, 58 percent of the respondents said that they did not know which organization was supporting their SHG. Only 18 percent responded that JEEViKA was providing their SHG with support – this proportion was higher in treatment arms than in control arms but the difference was not statistically significant.
- A significantly greater proportion of women in the treatment arms reported discussing community events like the Annaprashan and Bachpan Diwas. A higher proportion of treatment arm respondents also reported discussing a range of nutrition topics such as ANC, complication readiness during pregnancy, birth preparedness, care of the newborn, post-partum complications in mother and newborn, and the importance of dietary diversity, but because of small sample sizes none of these differences were significant.
- The proportions of women who reported discussing *poshak badi* cultivation, different ways of achieving food security, use of the FSF, use of HRF for healthcare, government schemes and breastfeeding practices was comparable across the treatment and control arms and ranged between being reported by 30-50% of the respondents.
- A large fraction of households could identify that that grains provide the body with energy, with a significantly higher proportion in the treatment arms reporting this than in the control arms.
- The main responses to food that helps the body grow and repair was all pulses, milk and curd. Meat and fish were both reported by less than a fifth of the households.
- Among the foods that protect the body from illness, green leafy vegetables and fruits were mentioned.
- Milk and milk products and green leafy vegetables were reported to make bones stronger.
- Knowledge about sources of iron was mixed, where almost 65 percent of households incorrectly identified milk as a source but at same time close to 60 percent said that green leafy vegetables were good sources of iron.
- About two-thirds of households, reported that orange colored fruits or vegetables were good sources of vitamin A, and about a third also mentioned green leafy vegetables as source.
- The main reason cited for keeping surroundings clean was that it helped keep people healthy and prevented them from falling sick.
- However, the main response of how to dispose of child stools was to leave them in the open.
- Knowledge about when to wash hands was also very varied, with 83 percent of the respondents who said that mothers should wash their hands after cleaning a child who has defecated but only 59.4 percent said after using the toilet.
- Knowledge of what materials to use to wash hands was somewhat higher, with more than 85 percent of the sample reporting soap and water.

- There was awareness about availability of funds for toilet construction through government schemes. However, no one mentioned either the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) or the Nirmal Bharat Abhiyan as one of these schemes.
- An overwhelming majority of women said that a pregnant woman should have checkups at least 2-3 times during pregnancy, but only 10.1 percent said that they should have the full 4 checkups that are recommended by the WHO. These proportions were not statistically different across arms. Knowledge of services provided during an ANC visit was reasonable, with more than half the sample reporting tetanus injections, and about a third reporting provision of IFA tablets or syrup, weight gain monitoring, blood tests and urine tests.
- Distressingly, almost two thirds of the sample reported that a pregnant woman should eat *less* than normal, and only about a quarter of the sample said that she should eat more than normal. Although about a third of the sample reported that she should eat more fruits and vegetables and more milk, meat, eggs and fish. None of these proportions were significantly different across arms.
- A large fraction of women could identify that a cause of anemia was lack of iron in the diets and knew the common symptoms of anemia.
- Respondents said that women should take (on average) 57.6 IFA tablets during pregnancy, which falls short of the actual prescribed 100 tablets, and that she should take around a tablet a day. The Anganwadi center was the main reported source of these tablets. Government frontline workers – the ANM and ASHA – were also mentioned as source.
- There is positive evidence on birth-preparedness. More than 80 percent of the households said that when a woman is close to delivery, the family should prepare by keeping a clean cloth, blade etc ready. About 67 percent of the sample said that the family should have enough money saved to pay for medicines or delivery charges.
- When asked about what a pregnant woman should do if she experienced vaginal bleeding, pain or burning sensation during urination, and other complications, the most common responses across different types of complications were to take her to the doctor, take her to the hospital or give her medicine. The patterns of responses were very similar across the two areas.
- Knowledge of breastfeeding practices were quite high in this sample. More than 75 percent of the mothers knew that the child should be fed colostrum, more than 80 percent knew that breastfeeding should be initiated within 1 hour after birth, and more than 95 percent knew about the need to exclusively breastfeed the child for the first six months. These proportions were not significantly different across arms.
- A large percentage of women could identify benefits of exclusive breastfeeding and how a mother that is unable to produce enough milk can increase milk production. The most commonly mentioned benefit was that it helps the baby grow better.
- The respondents' knowledge of appropriate age of introducing complementary foods is quite poor, especially with regard to introducing flesh foods.
- When certain responses on awareness of health and nutrition of the same respondents were compared between baseline and PE, improvement was noticed in reasons for exclusive breastfeeding, instances when hands should be washed and causes of anemia. But knowledge on feeding has deteriorated such as- awareness of timely introduction of vegetables, meat, chicken, fish and eggs in the diets of infants has declined. There has also been a fall in awareness on how a pregnant woman should change her diet and the number of IFA tablets she should consume.
- The main disease against which mothers reported that immunization provided protection was polio, reported by 78 percent of respondents. Awareness of all other diseases was very low.
- Of the total sample, close to 56 percent had ever had a kitchen garden, and this proportion was well balanced across treatment and control arms. Of those individuals who had ever had a

kitchen garden, a very large proportion of them had kitchen gardens at present and have had them for an average of about 21 months.

- Awareness of the community events was comparable across arms. Close to half of all the respondents had heard about Annaprashan Diwas, and about 32 percent had heard of the Bachpan Diwas.
- Awareness of government schemes targeted at mothers and young children was also high. When asked about the services provided at the AWCs, a large proportion of the women could accurately identify these services such as the VHSND or Routine Immunization Day, distribution of the Take home ration, pre-school education, information about immunization, growth monitoring and counseling on various topics.
- Awareness of the Janani Suraksha Yojana (JSY) and the Janani Shishu Suraksha Karyakram (JSSK) was very high. Knowledge of the eligibility requirements was lower.
- A large majority of households reported that the CM played a role in taking all the major decisions around the HRF. This was followed by the response of SHG members taking the decisions. A very small proportion of households mentioned that either VO members or the VO executive committee played a role in determining any of these aspects.
- Understanding among households of the FSF is mixed. Majority of the households believed that the CM both approved the request for the FSF as well as decided the time of repayment of the loan. A negligible proportion of the households mentioned that the VO committees – the Procurement and FSC – had any role to play in approving the request for the FSF.
- Exposure of respondent women to the message that all household members should eat tri-colored foods is not very high. However, among those that have heard this message almost all have tried it.
- Knowledge of the message that children under the age 2 years should eat tri-colored foods, is also not very high, with close to 35 percent of the mothers reporting having heard of the message in the treatment group and 19 percent in the control group, where the difference in knowledge among mothers across the treatment and control group is statistically significant. Among those who had heard of this message most mothers have tried it.
- A much larger fraction of households had heard about handwashing before preparing food, before feeding children and after defecation, and all report having tried these practices at home.
- The main sources of the messages on diet were the Anganwadi center and SHG meeting. Other common sources are family members, AWW, ASHA and the CM.
- The main sources of the hand-washing message are family members, SHG meeting, Anganwadi center or the ASHA. There were no significant differences between source of exposure to the message across the two arms baring a few exceptions.
- Handwashing practices are mixed, most of women reported that adults in their households always wash hands after using the toilet, however, about one-third of them reported that adults never wash hands after handling fecal matter.

Use of SHG and VO loans and services

- Roughly two-thirds of the women in the sample have received a loan from their SHG with an average amount borrowed ranging between INR 6744-7330. These patterns are similar across the treatment and control groups. When asked how this loan was used, about half of the respondent women reported using it for medical expenses.
- A much smaller fraction of women report taking a loan from the VO's HRF as compared to borrowing from the SHG directly. The two primary reasons cited for not borrowing from the HRF, are that they did not have a health emergency and had enough money to cover shocks. Other reasons were that they were denied the loan and did not know about the HRF. About a fifth of the women requested a loan from HRF but were denied and the primary reason for this

denial was cited as there being not enough money in the HRF, where this was more so in the treatment arm.

- Women in the treatment arm are more likely to have ever used the FSF for the purchase of food items. Among those who are not using the FSF, the common reasons cited were that they did not need any food items, didn't know about the FSF and bought food from open market instead. A small fraction of women reported that they requested to purchase food items through the FSF but were denied and the primary reasons cited were not having repaid a previous loan from the FSF, not having followed the right procedure, and VO executive members not approving the request.
- Among the women in our sample, about 56 percent have had a kitchen garden at some point in the past. Among those that have ever had a kitchen garden, almost all currently have one.
- Main sources of hearing about kitchen gardens were family/friends and the CM. Women in the treatment arms were more likely to have heard about kitchen gardens from SHG members as compared to women in the control arms. None of the women identified the LHS or the Kisaan Salaahkar as a source of initial knowledge of kitchen gardens.
- About 90 percent of the women who have a kitchen garden have it on their own land. A small proportion, about 8 percent, do this on land that is leased from someone else. They are growing a wide variety of vegetables in their kitchen gardens.
- Almost all households, that are growing vegetables and fruit in their kitchen gardens, are consuming these at home. Being able to grow vegetables and fruits at a cost lower than the market was identified as benefit of having a kitchen garden by large majority of the women. Other benefits identified include increased dietary diversity for the family and better-quality fruits and vegetables.
- Among the challenges of having a kitchen garden, interestingly more than half of the women said that there were no challenges. While others said that kitchen gardens were time consuming. Among those who have never had a kitchen garden, not having space/land to grow it was identified as a constraint by 80 percent of the women. Other inhibiting factors were not having sufficient resources to buy inputs or the skills to do it.
- Over two-thirds of the women have received take home rations and someone from their household has received pre-school education.
- Two thirds of the women received money through JSY during their last pregnancy. The average amount received through JSY was INR 1400, which is exactly the amount it stipulated by the government under this scheme.
- Roughly 56 percent of the women report receiving some benefit from JSSK during their last pregnancy. Reported benefits included: receipt of money, institutional delivery free of charge and free transportation to the health facility. This lines up with the provisions under this scheme.
- More than third of the women in our sample had participated in VHSND in the 3 months prior to the survey and over 90 percent report receiving immunization services.

Implications for the evaluation

- Examining the results along the impact pathway, we find that the intervention components are only now settling into the implementation framework of the JEEViKA program. JEEViKA staff are clearly aware of their roles, and of the intersection between their work in the SHGs and the additional components provided by other actors in the government system - health and nutrition frontline workers, and the coordination committees at all three levels. However, there are significant concerns with the content knowledge the CMs hold and their workload. This has important implications for the quality of implementation and to the extent to which they are able to convey this information to the women in the SHG meetings.

- The SHG platform, although an ideal venue to reach women in the rural areas, is often used for other interventions – ODF drives, life insurance enrollment drives, and so on – leaving only a small window of time where health and nutrition messages can be discussed. The use of the SHG platform to mobilize women for different issues on occasion is unlikely to change; therefore, streamlining and organizing the routine BCC content could potentially help assure greater fidelity to the intervention and more consistency in message delivery.
- The above two points are related to the finding that health and nutrition knowledge among women in treatment areas was not markedly better than women in the comparison areas. And indeed, there did not seem to be an improvement in health and nutrition knowledge over time among women in the treatment areas as compared to those in the control areas.
- Given that the health and nutrition BCC is a core component of the intervention, considerable effort will need to be expended to improve its reach and quality in the treatment areas. Without significant differences across treatment and control arms in the knowledge of CMs or of the households, it would be unreasonable to expect differences in household practices or nutritional outcomes.

1. Introduction

The impact evaluation of a program primarily answers the question of *what* impacts (if any) did a program have on the outcomes of interest, while a process evaluation (PE) answers the questions of *how* and *why* a program did or did not have that impact. Therefore, a PE forms an important component of an overall evaluation plan, and it is critical to opening the "black box" of programs and illuminating the processes by which programs achieve their impact, or not [1–5]. A PE should be theory-driven [6], to enable all stakeholders in an evaluation to understand what aspects of program implementation or utilization were instrumental to program success or failure. A PE is particularly important to implement with rigor in evaluations of complex interventions [4,7,8]. Examples of rigorous PEs in the field of nutrition are few [9–15], but there have been many recent calls for more attention to process-oriented research that can help shed light on how nutrition interventions can be operationalized effectively to achieve desired outcomes [16–18]. The challenges inherent in this type of evaluation are also well-understood, but here again, the science is evolving with methods that are particularly suited to illuminating pathways through which efforts to deliver nutrition interventions achieve their impact. This document, therefore, lays out the objectives, approach, and methods to be used for the PE in the JEEViKA-Multisectoral Convergence (JEEViKA-MC) pilot, and presents the results of the PE that was conducted from April to June 2017.

1.1 *Approach to the Process Evaluation*

Our overall approach to process evaluation was based on a few key overarching points:

1. All research questions, protocols, and data collection instruments were informed by the program impact pathways, and the actors identified along those impact pathways, for the JEEViKA interventions included in the pilot.
2. The sample for PE was drawn from the impact evaluation sample and was from both treatment and control groups. Within the selected sample, we interviewed JEEViKA staff, Village Organization (VO) committees, community mobilizers (CMs) and other government frontline workers, self-help groups (SHGs), and households.
3. Mixed methods were used to collect data to inform the research questions. Mini quantitative surveys were conducted to understand the awareness and knowledge of health and nutrition information and related services as well as trial and adoption of practices. Semi-structured focused interviews were used to understand the factors and mechanisms facilitating or limiting the implementation, exposure, and use of the JEEViKA-MC platform.
4. This process evaluation plan was discussed with the implementation team in January 2017, and was updated based on those discussions. The final document was shared with the implementers in March 2017.

Drawing on the design principles and approach above, the remainder of this document is structured as follows: **Chapter 2** presents a description of the JEEViKA-MC intervention and the resultant program impact pathways (PIPs). **Chapter 3** lays out the objectives of the PE. **Chapter 4** provides information on the data collection, including details of topics, methods, sampling, training, and data analysis. **Chapters 5 through 10** discuss the results of the PE. **Chapter 11** concludes with a summary of the results, our recommendations, and some implications for the program and its evaluation.

2. Program Description

The JEEViKA-MC model being piloted in Saharsa, Bihar, aims to address the immediate and underlying determinants of undernutrition among women and children. These determinants typically cut across sectors. The pilot leverages the women's SHG platform to address these determinants through two sets of interventions that complement each other, and that will be layered on to the existing core package of JEEViKA interventions. The interventions (described in detail below) are targeted to women who are members of the SHGs formed by JEEViKA in the study areas. JEEViKA typically targets women belonging to poor households to improve their livelihoods and enhance their household incomes. Within this target population, households with young children, mothers of young children, and pregnant women will be the special focus under JEEViKA-MC. The two-pronged intervention aims to address both demand and supply constraints on health, nutrition, and sanitation. One set of interventions seeks to improve household nutrition, health, sanitation, and hygiene practices; the other set seeks to improve uptake of health, nutrition, sanitation, and food security services offered through government programs, thus improving household availability of a more diverse food basket, use of micronutrient supplements, availability and usage of improved latrines, and use of preventive and curative health services. We describe both briefly below.

- **Component 1, Promoting Household Behavior Change:**

Intensive behavior change communication (BCC) will be conducted by the JEEViKA cadre of CMs, who will be trained to deliver messages on maternal and child nutrition and health, water, sanitation, and hygiene behaviors at bi-monthly SHG meetings. The BCC, especially focused on households with women of reproductive age and young children, will be accompanied by community monitoring and support offered by community workers and other SHG members. While the CMs exist as a JEEViKA cadre in all areas, they will only be providing health and nutrition BCC in the 12 treatment Gram Panchayats (GPs) that are part of this evaluation. The 12 control GPs will not receive these health and nutrition messages.

The BCC messages will focus on maternal, infant, and young child feeding practices, specifically diets during pregnancy, early initiation and exclusive breast feeding, timely and appropriate complementary feeding , ante-natal and postnatal care, awareness about services and benefits of iron-folate supplementation, vitamin A supplementation (for children), institutional delivery, routine immunization, Integrated Child Development Scheme (ICDS) entitlements such as supplemental food, ways of improving household food security through improved use of JEEViKA's Food Security Fund (FSF), use of government entitlement schemes that can improve health, nutrition, or food security (e.g., the Public Distribution System (PDS), the Janani Suraksha Yojana (JSY), etc.), the adoption of kitchen gardens, and the importance of safe water, sanitation, and hygiene practices, including use of latrines. They would also be made aware of the Health Risk fund (HRF) and the Sanitation, Health, and Nutrition (SHAN) fund, which individual SHG members can access to finance treatment, build toilets, and purchase inputs for kitchen gardens, etc. The SHAN Funds are only available in Saur Bazar and not across all the 12 Treatment panchayats.

It is planned that the BCC delivered by the CM will be complemented by targeted home visits, peer group meetings, and community events to be organized by the Health subcommittee (HSC) members. These HSC members will be trained on health and nutrition by health Community Resource Persons (CRPs) and by the World Bank team in Saharsa.

- **Component 2, Strengthening convergence to improve access and utilization of key public services:**

This component consists of strengthening of mechanisms to promote interface between demand for services (on the community side) and supply of services of multiple departments (service providers),

and facilitation to improve coordination and solve problems, thus leading to improved awareness, access, and utilization of nutrition sensitive services.

The departments and services targeted here will be (a) ICDS for nutrition services; (b) National Rural Health Mission (NRHM) and District Health Society for health services; (c) Public Health Engineering Department (PHED) and Rural Development (RD) Department for sanitation services; (d) Krishi Vigyan Kendras (KVKs, farm science centers) and Horticulture department for agriculture services; and (e) Panchayati Raj Institutions (PRI) for local governance issues.

The HSC members – part of the VOs, the federation of the SHGs – will be trained to improve convergence and coordination efforts among these departments by assisting government frontline workers like the Anganwadi worker (AWW), the Accredited Social Health Activist (ASHA), and the Auxiliary Nurse Midwife (ANM) in their duties. Several specific points of contact exist for this purpose under the government programs – the Bachpan Diwas that is held weekly, and the Annaprashan Diwas and the Village Health Sanitation and Nutrition Day (VHSND), which are held monthly. While the VHSND was already instituted in all areas, it was either non-functional or minimally functional before the start of this pilot. In addition to these points of convergence, there is an attempt to revive and strengthen other institutional mechanisms like the Village Health Sanitation and Nutrition Committee (VHSNC) and village-level monitoring committee, Health Sub-center meetings, and VO meetings.

2.1 *Program Impact Pathways*

The JEEViKA-MC program impact pathways for the nutrition BCC component and the convergence component have been represented in Figures 1-1 and 1-2. This framework maps programmatic *inputs* to anticipated long-run *impacts*, working through the *processes or activities* to be undertaken, *outputs* to be generated, and shorter-term *outcomes* to be achieved. In the context of the JEEViKA-MC pilot, the following are definitions and examples of each of these terms:

- *Inputs*: Those materials or resources made available within the pilot, to achieve the program objectives. For example, the health and nutrition BCC materials, and training of trainers.
- *Processes/activities*: The actions of the key players within the JEEViKA-MC pilot that are designed to meet the program objectives. For example, the dissemination of health and nutrition BCC to SHGs, and the increased awareness of health and nutrition practices.
- *Outputs*: The tangible or intangible products that result from the program-related processes/activities. For example, the increased adoption of health and nutrition practices or use of services.
- *Outcomes*: The short-term benefits the program is designed to deliver. For example, increased dietary diversity at the household level, improved hygiene practices, etc.
- *Impact*: The long-term program objectives. In this case, that would include women's body mass index (BMI) and child dietary diversity.

We have made an effort to map only those inputs and processes that are unique to the JEEViKA-MC pilot, as opposed to interventions that are part of the standard JEEViKA model.

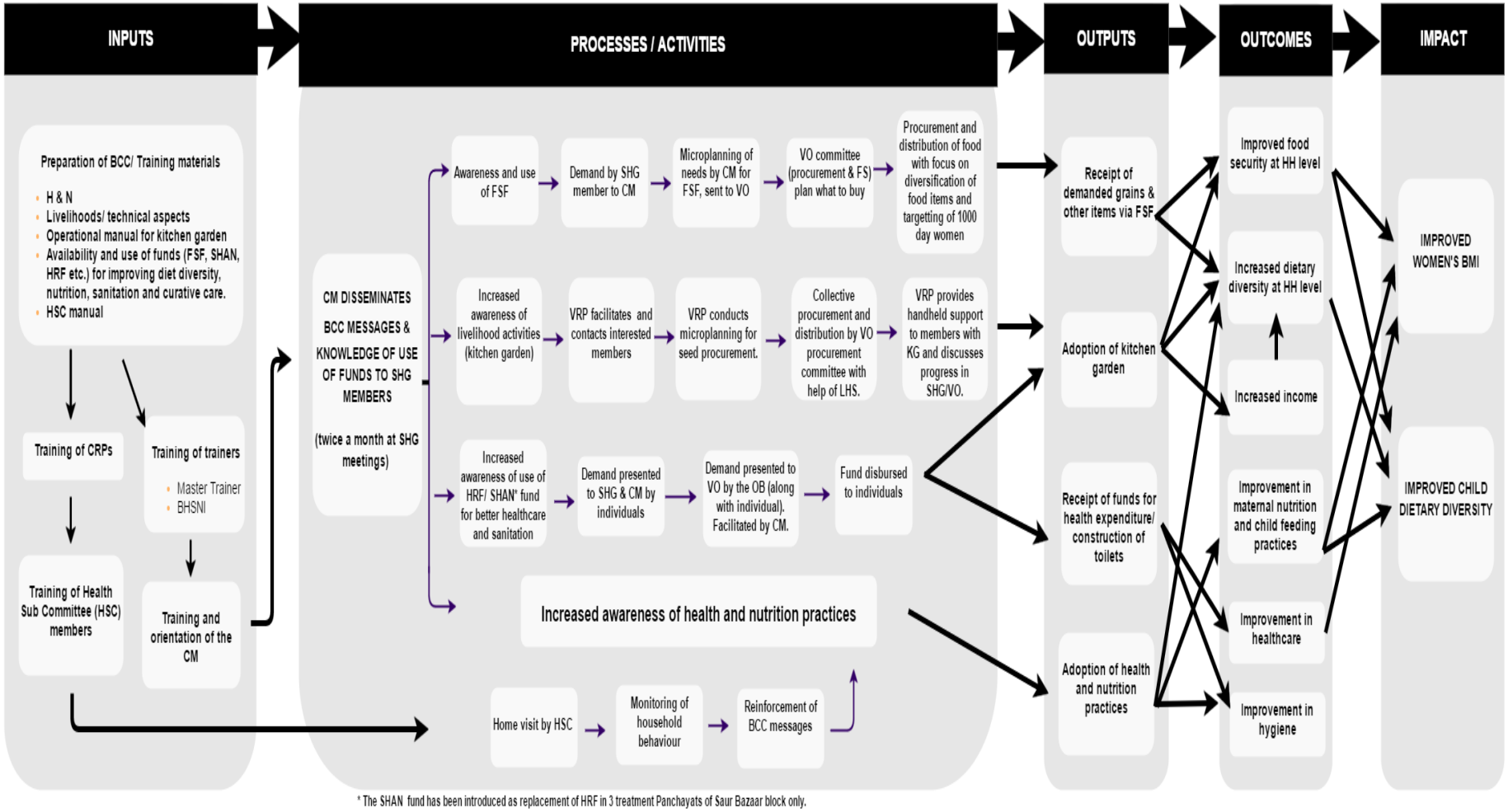

Figure 1.1 Program Impact Pathway of promoting household behavior change

2.1.1 Promoting Household Behavior Change

1. Inputs

The main input of the MC pilot is the preparation of materials for BCC, and the training of JEEViKA program person or community representatives for imparting the same. The BCC/training materials used to train the CM include health- and nutrition-related modules that have been developed by the JEEViKA Technical Support Program (JTSP), supplemented by training and communication materials prepared for the pilot with inputs from the World Bank staff in Saharsa. In addition, a separate set of health- and nutrition-related modules have also been developed by the World Bank team for use in training the HSC members.

In addition to messages on health and nutrition, the BCC-related materials include messages on nutrition-related livelihoods and technical aspects (e.g., kitchen gardens) and information regarding the availability and use of existing JEEViKA funds (FSF, HRF/SHAN) to improve diet diversity, sanitation, and curative care. Specifically, within the MC pilot, the SHG members are encouraged to use the FSF to diversify their food baskets and also target the diet of pregnant and lactating women. In three treatment GPs of Saur Bazaar, the HRF has been remodeled as the SHAN fund (operational in Saur Bazar block only), which provides INR 3,00,000 to VOs for its members to use for health financing, construction of toilets, and nutrition financing. The intervention seeks to informally combine the delivery of health and nutrition messages with awareness of the use of these funds.

The Block Health Sanitation and Nutrition Integrator (BHSNI) and the Master trainer (MT) are trained on the BCC modules by the Health and Nutrition (H&N) team of JEEViKA and the World Bank team in Saharsa. The BHSNI and MT are then responsible for the training of the CMs.

A separate manual has been prepared for cultivation of kitchen gardens and the responsibilities of the HSC members. HSC is a subcommittee of the VO and consists of community representatives and not JEEViKA program persons. These members are trained by the CRPs on how to help organize Annaprashan and Bachpan Diwas – mobilize households to attend these events and carry out demonstrations on food preparation. They are also trained to conduct peer group meetings and will undertake targeted home visits in order to reinforce BCC messages.

Assumptions:

- Trainings held by the JEEViKA H&N team and the World Bank team are attended by the MTs, the BHSNIs, and the CRPs; in case of absenteeism, additional trainings are conducted.
- MTs and BHSNIs are also instructed on how to train the CMs.
- All CMs receive trainings on the BCC and other materials from the MTs and BHSNIs; similarly, the HSC members receive training from the CRPs. Again, in case of absenteeism, additional trainings are organized and conducted.
- One-time training on a module is adequate for knowledge retention and delivery.

2. Processes/activities

The *input* of training and orientation of the CM on all aspects of the BCC materials leads to the *process* of the CM disseminating this information to the SHG members at bi-monthly SHG meetings. This dissemination of information is expected to trigger various processes:

- The first is increased awareness of the JEEViKA FSF among SHG members. Once they are aware of this fund, interested SHG members may place their demand for food grains and other items to the CM. The CM conducts micro-planning of SHG members' needs, and this micro-plan is then sent to the VO. At the VO level, the Procurement Committee (PC) and the Food Security Committee (FSC) together determine what is to be bought using this fund, based on the demand from the SHGs. The demanded items are procured and distributed to the SHG

members. In the treatment areas, the BCC regarding the use of FSF is expected to focus on diversification of the food basket and targeting of women in the 1,000-day window.

- The second is the increased awareness among SHG members about kitchen gardens. The Livelihoods Specialist (LHS) trains the Village Resource Person (VRP) on the technical and operational aspects of establishing kitchen gardens. The VRPs attend SHG meetings and disseminate information about kitchen gardens and their benefits. They take note of interested members and send the micro-plan to the VO. The LHS supervises the collective procurement and distribution of inputs by the VO's PC. The VRPs also visit homes, provide support to members cultivating kitchen gardens, and discuss progress and important implementation-related issues at SHG and VO meetings.
- The third is the increased awareness of the SHAN fund among SHG members in the areas where this fund is being introduced. The SHAN fund operates much like the HRF, with members contributing INR 5-10 per month (the exact amount is decided by community institutions based on the capacity to save of the poorest members of the SHGs). This SHAN saving is a voluntary saving open to all members of the community institutions for expenditure and investment in sanitation-, health-, and nutrition-related activities. Increased awareness of the availability of this fund leads to an increased demand for the money by individuals. This demand is presented to the SHG members. If the SHG approves the individual's demand for this fund, the executive members of the SHG (along with the individual) present this demand to the VO. The process is facilitated by the CM. The VO then disburses the funds to the individual's account.
- Fourth, the dissemination of health- and nutrition-related BCC materials by the CM leads directly to an increased awareness of health and nutrition practices among SHG members.
- Finally, targeted home visits by the HSC members and their monitoring of household behavior through visits and peer group meetings reinforce the health and nutrition messages in households.

Assumptions:

- SHG meetings are held regularly. Most or all SHG members are present at the meetings where health and nutrition, information about kitchen gardens and other nutrition-related livelihoods activities, and about the funds are delivered.
- A plan is in place for reaching those SHG members who are unable to attend the trainings.
- The CM is adequately trained on how to disseminate these messages to the SHG members, and has the materials she requires to do so.
- If there is dropout of CMs, there are arrangements for additional recruitment and retraining.
- Content delivered to the SHGs is reiterated in subsequent meetings.
- There are benefits to purchasing food grains and other items through the FSF as opposed to the open market, so that SHG members who are aware of the FSF choose to use it.
- The CM conducts micro-planning of food needs and conveys demand for the FSF to the VO.
- The various funds are available with the VO, and are disbursed on demand.
- The PC and FSC are able to arrive at a consensus of what food grains and other items to purchase using the FSF.
- The food items that are decided on by the PC and the FSC are available for purchase in the market.
- Adequate facilities are available for storage and distribution of food items purchased.
- The VRP and LHS are adequately trained to provide technical support to SHG members, and to conduct micro-planning of any livelihoods-related needs.
- Household members attend peer-group meetings, and the HSC members engage households in nutrition-related discussion through the peer-group meetings and home visits.

3. Outputs

Each of the processes or activities leads to a certain output. These are listed below in the same order as used when discussing the processes:

- The distribution of food procured via the FSF results in the receipt of demanded grains and other items by individual SHG members.
- The technical assistance and inputs provided by the VRP and LHS leads to the adoption of livelihoods activities such as kitchen gardens.
- The disbursement of SHAN funds (where applicable) leads to the receipt of these funds by individual SHG members, for use in health expenditure/toilet construction, etc. It also leads to the adoption of kitchen gardens through the use of this fund for the purchasing of inputs.
- Availability of HRF/SHAN leads to improved financing of health – covers expenditures such as hospitalization, surgery, post-operative care, etc.
- The increased awareness of the health and nutrition messages through the CM and HSC leads to increased adoption of health and nutrition practices by individual SHG members.

Assumptions:

- Households have adequate resources to purchase seeds and other inputs for kitchen gardens (if support is not provided through the SHAN fund and livelihood fund), and have adequate land to set up the kitchen garden of the appropriate size.
- SHG members understand, retain, and begin to adopt the health- and nutrition-related messages that they receive information on in the SHG meetings, peer group meetings, and home visits.
- SHG members pass on messages to pregnant and lactating women within their own households, and possibly to other women in the community.

4. Outcomes

The outputs listed above can result in one or more outcomes. Again, these are discussed in the same order below:

- The receipt of grains and other food items by SHG members results in improved household food security and improved household dietary diversity.
- Adoption of kitchen gardens results in improved household food security, improved household dietary diversity, and possibly increased household income (if these foods are sold).
- Receipt of SHAN fund money leads to an improvement in hygiene practices, increase in demand for a toilet and its use and, thus, reduction in open defecation.
- Receipt of HRF/SHAN leads to improvement in healthcare.
- The adoption of health and nutrition behaviors leads to improvement in hygiene, improvement in nutrition and feeding practices, and increased dietary diversity at the household level.
- Finally, increased household income, in turn, can affect food security and dietary diversity at the household level.

Assumptions:

- The additional income earned from livelihoods activities is spent (at least in part) on food and more diverse foods for the household.
- The toilets constructed using funds available from the SHAN fund are then utilized by the household – this assumes also the availability of water, sewage removal services (in the case of septic tanks), and so on.
- The funds received from HRF are used in curative care.
- The households that adopt kitchen gardens are cultivating a diverse set of fruit and vegetables.

- The grains and other food items that are received by the households from the FSF do, in fact, diversify the food basket, and are consumed by members of the household, especially by those in the targeted 1,000-day group.

5. Impacts

Finally, the outcomes described above then lead to long-term impacts. The two main impacts that this evaluation is powered to study are improvements in women's BMI and improvements in child dietary diversity.

- Improved household food security leads to improved women's BMI.
- Improved household dietary diversity leads to improved maternal dietary diversity and child dietary diversity.
- Improved maternal nutrition and child feeding practices lead to both improved women's BMI and improved child dietary diversity.
- Improved access to healthcare services leads to improved BMI among adult women.

Assumptions:

- Greater availability of food at the household level leads to greater consumption of food by women and children within the household.
- Increased diversity of foods available at the household level leads to greater diversity of foods eaten by the children within the household.

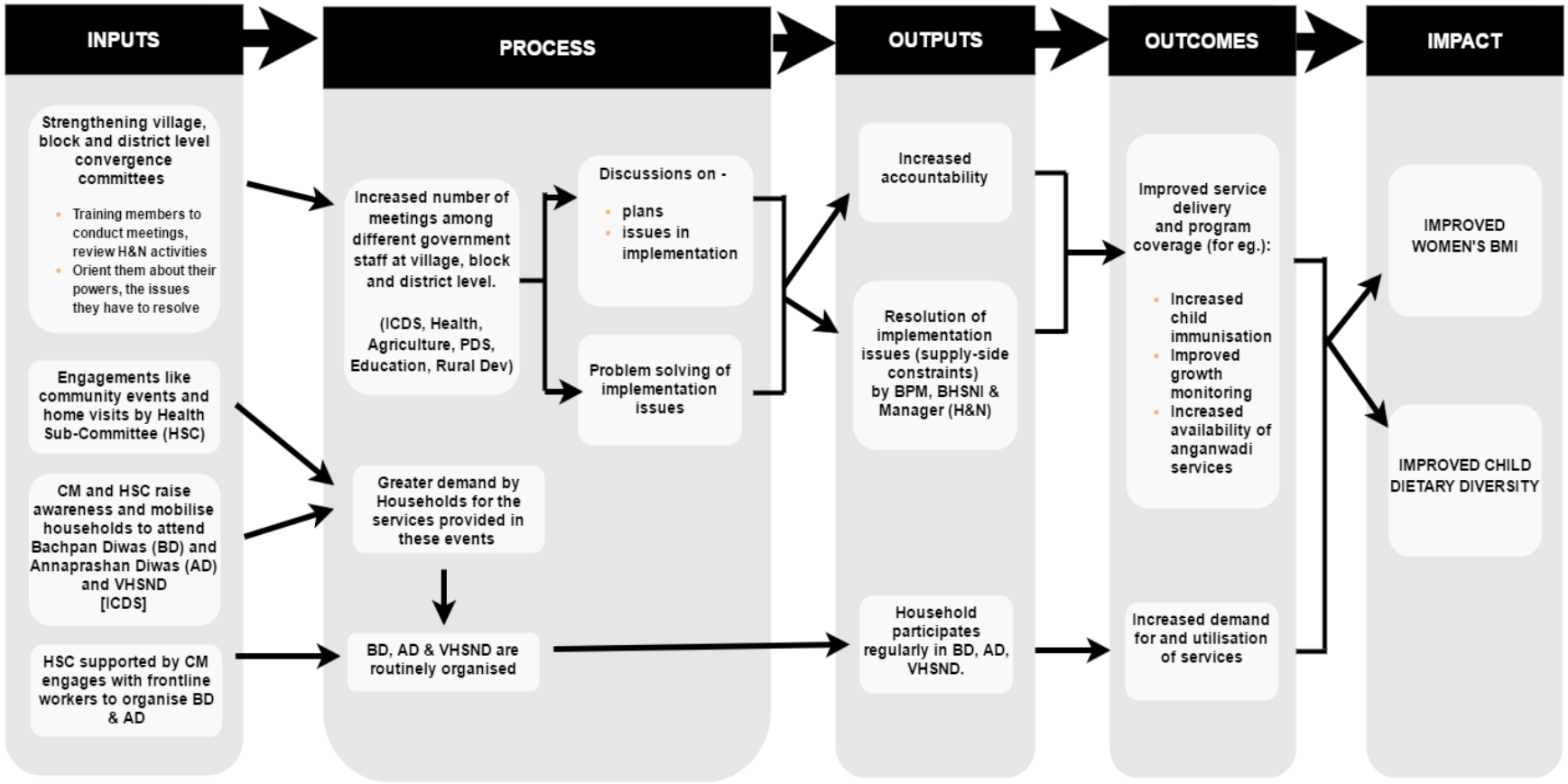

Figure 1.2 Program Impact Pathway for the convergence component

2.1.2 Improving access to and utilization of key public services

The second component of the intervention is the convergence piece that focuses on improving the access to and utilization of government-provided services, particularly those coming through the various entitlement schemes. The PIP for this component has been depicted in Figure 1-2.

1. Inputs

There are four main inputs into the convergence component.

The first of these is setting up/strengthening of village-, block-, and district-level coordination committees. These committees are intended to bring together government workers from various different departments – health, ICDS, education, agriculture, revenue, etc. – and are presided over by different functionaries at different levels. The Panchayat coordination committee is headed by the Mukhiya and convened by the JEEViKA Area Coordinator (AC). It involves participation of the ICDS Lady Supervisor, ANM, Head or senior teacher from local school, PDS dealer, Agricultural extension worker, ICDS AWW, ASHA, JEEViKA CM, and SHG members. The Block coordination committee is headed by the Block Development Officer (BDO) and convened by the JEEViKA Block Project Manager (BPM), and includes the Medical Officer-in-charge, ICDS Child Development Project Officer (CDPO), Block Coordinator for sanitation, Circle Officer, Block Agricultural Officer, and Block Education Officer. Finally, the District coordination committee is headed by the District Magistrate and convened by the JEEViKA District Project Manager (DPM), and involves the Civil Surgeon, ICDS District Program Officer (DPO), District Supplies Officer, District Coordinator for Sanitation, Executive Engineer – PHED, District Agriculture Officer, District Education Officer, JEEViKA Manager – Health & Nutrition, and World Bank MC pilot field team.

The "strengthening" of these committees involves training the members of these various coordination committees on how to conduct meetings and what the scope of the committee is. Members are oriented about the role of the committee, how they are meant to review health and nutrition activities within their jurisdiction, and how to resolve issues related to the same.

The second set of inputs are the periodic community events and targeted home visits organized by the HSC members.

The third set of inputs into the convergence component are the efforts made by the CM and HSC to mobilize households to attend ICDS events such as the Annaprashan Diwas, Bachpan Diwas, and the VHSND. Since the CM and HSC belong to the communities they serve, they are in the unique position of being able to easily identify those women who are pregnant and lactating, or whose children require immunizations. Hence, it is proposed to use the CM's and HSC's knowledge of these communities to increase household-level awareness of these activities.

The fourth input involves HSC members engaging with the other frontline workers (ASHA, AWW) in organizing the Annaprashan Diwas and Bachpan Diwas. They help in carrying out demonstrations. They are supported by the CMs.

Assumptions:

- The coordination meetings are held regularly and follow-up actions are taken.
- The various government functionaries at different levels are aware of their roles within the coordination committees.
- The JEEViKA functionaries are also aware of their convening roles in these committees, and schedule these meetings at the required periodic intervals.
- HSC members are able to correctly identify those households within their purview that require these services, and are able to provide information to them.

- The CM and HSC members are aware of their role in mobilizing households and creating awareness of ICDS events.
- The HSC members are aware of their role in organizing the ICDS events.
- The CM's assistance is accepted by the HSC and other frontline workers.

2. Process

The strengthening of the coordination committees leads to an increased number of meetings among the different government staff at all three levels – Panchayat, block, and district. At these meetings, upcoming plans are discussed, any issues in provision of services that have arisen are brought to the attention of the relevant official, and convergence activities at the Annaprashan Diwas, Bachpan Diwas, and the VHSND are overseen. The meeting minutes containing any important issues raised at the village level or important events taking place are communicated to the BPM through the AC. Thus, any issues arising at the village or block level are discussed at the meeting of the Block-level convergence committee.

The HSC raising awareness of the Annaprashan Diwas, Bachpan Diwas, and VHSND leads to greater demand by households for the services provided in these events. This, coupled with HSC's assistance in organizing the ICDS events, leads to routine organization of these events on the specified weekly or monthly basis.

Assumptions:

- All relevant government staff are aware of the scheduling of the meetings and their need to attend. The AC ensures minutes of the Panchayat coordination committee meetings are recorded and sent to the block coordination committee for resolution of any issues.
- Households value the services being provided at the Annaprashan Diwas, Bachpan Diwas, and VHSND, and so greater awareness leads to greater demand for these services, and greater participation in these events.
- The Annaprashan Diwas, Bachpan Diwas, and VHSND provide the services they are intended to provide. This assumes that the equipment necessary (vaccinations, growth monitoring equipment, visual aids for increasing awareness, etc.) are all available and functional.

3. Outputs

The outputs arising out of the regular functioning of the coordination committees are increased accountability of the government officials and improved resolution of implementation issues by BPM, BHSNI, and H&N Manager.

The output arising from increased demand among households for ICDS services and routine organization of the Annaprashan Diwas, Bachpan Diwas, and VHSND is increased participation of households in these events.

Assumptions:

- Issues raised at the Panchayat level are communicated to the block convergence committees.
- The BPM, BHSNI, and Manager (H&N) are aware of their responsibilities in resolving implementation issues and take action in this regard.
- There are no other barriers to the participation of the households in the ICDS events.

4. Outcomes

The two main outcomes that come from the outputs mentioned above are, first, improved service delivery and program coverage (for all government entitlement schemes and other programs, across all involved departments), and second, increased demand for and utilization of services.

Assumptions:

- There are no supply-side constraints (e.g., non-availability of funds for the purchase of food at the Anganwadi Centre (AWC), etc.) that cannot be resolved by the village-, block-, and district-levels staff, and that prevent improvements in program coverage.

5. Impact

The expected impacts of the convergence are improvements in women's BMI and in child dietary diversity.

Assumptions:

- The services provided at the Annaprashan Diwas, Bachpan Diwas, and VHSND are of good quality.
- The services include some information regarding the need for dietary diversity, and on IYCF practices.
- Growth monitoring of adults and children is conducted regularly, records are maintained, and the link between weight or BMI and health is made clear in these events.

2.2 Intersection of the two arms of the intervention

The PIPs as drawn indicate that the nutrition-BCC and the convergence components of the JEEViKA-MC pilot are separate. However, there are, in fact, several points of intersection between these two components of the intervention, which would have been hard to depict graphically. For example, several of the coordination platforms, such as the Annaprashan Diwas, Bachpan Diwas, and VHND, serve both as venues for coordination between the various frontline workers and the CM as well as points for the delivery of nutrition- and health-related BCC.

2.3 Actors involved in the implementation of JEEViKA-MC pilot

Multiple actors from different organizations (e.g., World Bank, JEEViKA) are involved in the implementation of the JEEViKA-MC pilot from the state down to the village level (Figure 1-3). For the purpose of the PE, it is important to understand the roles and responsibilities of each of these key players as well as their interactions with one another.

Since there are many actors involved in this pilot, there are some issues that might impinge upon the implementation of the intervention. These include the provision of adequate support to community structures and cadres by concerned project staff; workload and competing priorities; issues related to timely implementation; inclusion of pilot within the overall planning; and review and monitoring processes within JEEViKA. We attempted to identify some of these through our interviews with key respondents.

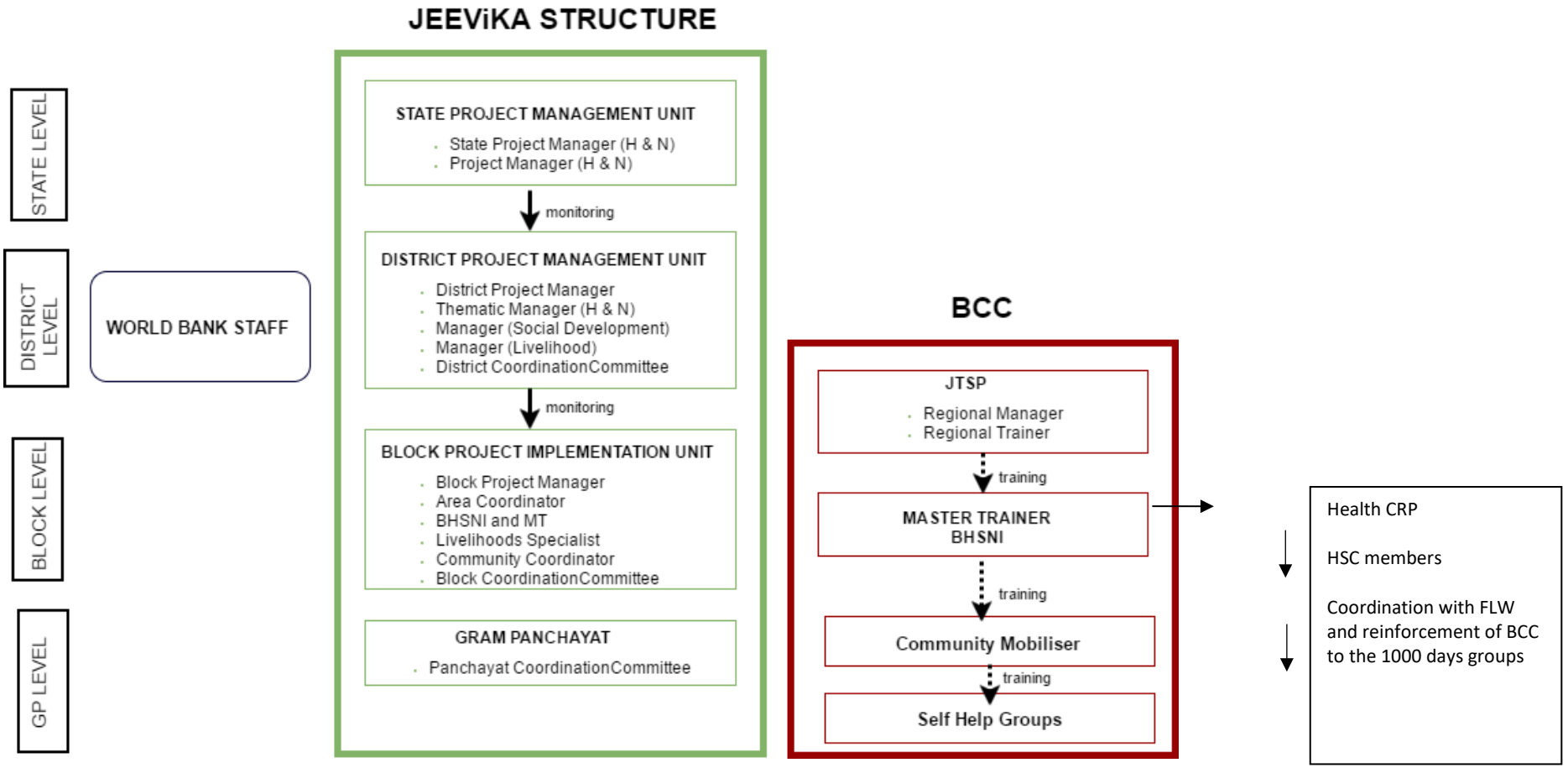

Figure 1.3 Actors involved in the implementation of the JEEViKA-MC pilot

2.4 Updates to the intervention

When the process evaluation study began, interviews with the JEEViKA staff and cadres and the process tracing exercise revealed some changes in the program's implementation and differences from the PE protocol. Some of these changes altered the design of the PE, we have mentioned the details below.

1. We understood the FSC to be a three-person VO-level committee, constituted at the time of procurement of food through the FSF to ensure that prices were affordable for even the poorest of the poor members. However, it was discovered during the second round of pretesting that the SHG members decide the price to purchase unanimously in a VO meeting and a committee is not formed for this purpose. The corresponding interview was therefore dropped from the evaluation.
2. At the time of our visit to the State Project Management Unit (SPMU) in Patna, we discovered that ledgers and records of meetings are not digitized at a level lower than the Cluster Level Federation (CLF), and that the Management Information System (MIS) information could not be shared with us. As a result, we were unable to complete the proposed review of the MIS information to assess the status of SHG and VO saturation in the three blocks.
3. The SHAN fund which was supposed to be introduced only in a few treatment panchayats of Saur Bazaar, is now being provided in all the treatment panchayats of the three blocks part of the MC pilot. It was introduced in Sonbarsa and Pattarghat in May 2017.
4. Training of the HSC was ongoing at the time the process evaluation began. While the training had been completed in some blocks, the committees were not fully functional and members of the HSC were not aware of their roles and responsibilities. Since members would not have been able to provide information on the work they were doing, the challenges they faced, the processes of the intervention and their workload, it was therefore decided not to include these interviews as part of the PE.
5. A new cadre called the Community Nutrition Resource Person (CNRP) was hired in June and July of 2017. JEEViKA has engaged one CNRP in each panchayat to coordinate all health and nutrition activities at the Panchayat level. The CNRPs will be required to visit the VHSND, Annaprashan diwas and Bachpan diwas, monitor the rollout of BCC and will also have a role in sanitation. They will typically visit VO meetings to facilitate health and nutrition (H&N) discussions there, and will support the HSC in their training and in home visits. This is a permanent position and the CNRP will be required to work up to 10 days a month. The CNRP will report to and will be paid by the CLF at the rate of INR 160 per day, for a maximum amount of INR 1600 per month. The training of CNRPs was (tentatively) scheduled for September 2017.
6. A new method of BCC message delivery was introduced through videos with the support of Digital Green. CMs and VRPs were trained in May 2017 to use projectors for the same. The first dissemination took place in June 2017.
7. The health department started procurement and distribution of IFA based on the demand of District Health Society (DHS) in July 2017.
8. A new District Project Manager (DPM) was appointed in Saharsa with effect from 1st August 2017.

Summary

- There are two main components of the JEEViKA-MC pilot – behavior change communication, and strengthening convergence and coordination.
- Under the first component, the CM was designated as the main cadre responsible for the delivery of health and nutrition behavior change communication to the SHGs. The HSC was recently constituted to assist with this role.

- Under the second component, convergence committees were to be set up or strengthened at the panchayat, block and district levels. The HSC conducts home visits and increases awareness of the community events.
- There were several updates to the intervention between the time of writing the protocol, and the rollout of the PE survey.
- Some of the changes that affected the PE design include delays in training and use of the HSC and the recognition that the FSC was not a standing committee – both resulted in the surveys for these actors not being administered at the time of the PE.
- Other changes included increased coverage of the SHAN fund, introduction of new cadres, new modalities for delivering messages to the community, and the change in the DPM.

3. Objectives of the Process Evaluation

We identified five broad domains pertaining to each of the specific program impact pathways. These include: implementation platforms, training and awareness of roles, implementation processes, exposure of SHG households to key messages, and utilization of the intervention. The process evaluation seeks to explain **five broad questions** that map to each of these domains. These broad questions were identified after developing a detailed list of specific research questions for each of these domains, which is provided in **Table A.1**.

The core research questions, developed based on this process above, are as follows:

6. Are critical intervention platforms for the behavior change communication (e.g., SHGs, VOs) and convergence (e.g., convergence committees, Annaprashan Diwas and Bachpan Diwas) in place and functional?

7. Do all key actors know their roles, responsibilities, and relationships, as they pertain to the goals of the program, and do all key actors possess necessary content knowledge to execute their roles effectively?

8. What factors affect the delivery of the multiple intervention components?

    a. What factors affect the BCC messages related to health and nutrition, kitchen gardens (e.g., facilitators and barriers to CMs delivering content, SHGs demanding services, etc.)?

    b. What factors affect whether and how key players (e.g., SHG members, VO members, VRPs, etc.) take requisite sector-specific actions following the BCC content delivery?

    c. What factors affect the functioning of the coordination committees and actions of key players to ensure demand for and utilization of health and nutrition services?

9. To what extent are all the women in the 1,000-day window receiving critical messages and critical services related to health and nutrition (e.g., dietary diversity, kitchen gardens, sanitation, funds, etc.)?

10. What factors affect trial and adoption of the key actions by the client populations (e.g., dietary diversity, setting up of kitchen gardens, infant and young child feeding (IYCF) practices, etc.)?

Based both on the respondents and on the type of question being asked, we finalized the methods we would use to gather the information needed. We identified five broad domains pertaining to each of the specific program impact pathways. These include: implementation platforms, training and awareness of roles, implementation processes, exposure of SHG households to key messages, and utilization. The list of questions, along with the respondents and the methods used is presented in Table 3.1 (Note: there are slight modifications from the protocol based on the availability of data and other constraints, see Section 2.4 for more information).

Table 3.1: Summary of key research questions and methods

Domain	Research question(s)	Methods	Respondents
Implementation platforms	Are critical intervention platforms for the behavior change communication (e.g., SHGs, VOs) and convergence (e.g., convergence committees, Annaprashan Diwas & Bachpan Diwas) in place and functional?	Structured interviews	SHG VO CM Master Trainer BHNSI JEEViKA staff part of convergence meetings (e.g., area coordinator, block program manager)
Training/outcomes of training	- Do all key actors know their roles and responsibilities in relation to the goals of the program, and their relationship to one another? - Do all the actors possess necessary content knowledge?	Review of training modules Structured interviews	CM VRP LHS VO MTs/BHSNI PC SHG executive committee
Implementation processes	- What factors affect the delivery of the BCC messages related to health and nutrition, kitchen gardens (e.g., facilitators and barriers to CMs delivering content, SHGs demanding services, etc.)? - Where relevant, is the BCC being provided in a timely fashion (e.g., is the information around kitchen gardens being tailored to planting seasons)? - What factors affect whether and how key players (e.g., SHG members, VO, VRPs, etc.) take requisite actions following the BCC content delivery? - What factors affect the functioning of the convergence committees and actions of key players to ensure demand for and utilization of health and nutrition services? - What are the review processes within JEEViKA to ensure functioning of and support to the MC pilot?	Structured interviews Observation of delivery of BCC in SHG meeting	CM ASHA, AWW VO VRPs SHG
Exposure – reach of key messages	- To what extent are all the households with women in the first 1,000-days period receiving critical messages related to health and nutrition (e.g., dietary diversity, kitchen gardens, sanitation, funds, etc.)? - To what extent are the health and nutrition service-related grievances of women in the first 1000-day period addressed?	Household survey–	Subsample of baseline respondents
Utilization/Impact	- What factors affect trial and adoption of the key BCC messages (e.g., dietary diversity, setting up of kitchen gardens, IYCF practices, etc.) received?	Household survey	Subsample of baseline respondents

4. Methods

This section describes in detail the methods used for data collection, data cleaning and analysis.

4.1 Data collection

Six gram panchayats (GPs) were selected for the process evaluation, three from the treatment arm, and three from the control. Except for Pattarghat, which only had one treatment GP, all other blocks had multiple treatment and multiple control GPs. To allow for representation of both treatment and control arm from all three blocks, IFPRI selected one GP at random from each arm in each block. The list of GPs selected for the purpose of the PE is given in Table 4.1.

Table 4.1: Selection of GPs for the process evaluation

	Saur Bazaar	**Sonbarsa Raj**	**Pattarghat**
Treatment	Ajgaiba	Mokma	Pama
Control	Saur Bazaar	Baraith	Dhabauli South

IFPRI partnered with DCOR Consulting Pvt Ltd (henceforth 'DCOR') for the collection of data for the process evaluation. The survey firm was actively involved in the translation of the tools, the two rounds of pre-testing, the training of enumerators, supervisors and data quality assurance staff, in the data collection, and in the post-collection processing and cleaning of the data. More information on these processes is provided below.

4.1.1 Pre-testing

IFPRI and DCOR conducted two rounds of pre-testing of tools –Phase I on 12th and 13th April 2017, and Phase II from 4th to 6th May, 2017. Each pre-test was conducted by two members of the IFPRI team and two members of the DCOR team. Prior to the field-testing, the IFPRI team gave a detailed briefing to the DCOR team on the study objectives and tools. In the first phase, the tools developed for the interviews with the households, CMs, AWWs, and Accredited Social Health Activists (ASHAs) were pre-tested. The HSC tool was also tested at the time of the first pre-test, and based on low levels of knowledge and incomplete responses it was decided not to administer this tool at the time of the process evaluation. In the second phase, another round of field testing of household and CM questionnaires were conducted, and the PC, VRP, VO Executive Committee and SHG observation tools were also tested. In the second phase, the tool developed for the FSC was also tested, and it was discovered that this committee is not a standing committee and is only constituted when purchases of food are to be made. For this reason, this tool was also dropped from the process evaluation.

In each phase of field-testing, observations made by the teams during the interviews were noted down in the field, and these were discussed as a group in debriefing sessions held after returning from the field. The pre-tests were aimed at capturing the amount of time taken by each tool, the translation and use of local terms, and the ease with which respondents understood the questions as phrased. After the pre-tests, the tools were revised based on the feedback provided by the teams.

4.1.2 Selection and training of enumerators

DCOR was responsible for locating and contacting potential enumerators and managing the training logistics. The process of locating enumerators started a month or so before the training was scheduled. DCOR contacted field supervisors and female enumerators with whom they had worked in the past, deliberately selecting those who were from Bihar or Jharkhand with knowledge of local dialects. The team that came to Saharsa consisted of 23 enumerators and 8 supervisors or data quality assurance staff, which was higher than the actual number of people required for the field. This permitted IFPRI and DCOR to screen and select the best enumerators from the pool for the final data collection teams.

Intensive classroom and field training of both the quantitative and qualitative study teams was undertaken (in parallel sessions) from May 8 to 18, 2017. The qualitative team consisting of 8 participants attended the training program from 8-18 May 2017, and the quantitative team consisting of 23 participants attended the training program from 8-17 May 2017. The quantitative team was trained on the household survey, while the qualitative team was trained on the CM, VRP, SHG observations, VO executive committee and PC tools. Two teams consisting of one Data Quality Assessment (DQA) person and one enumerator each were also trained on the ASHA and AWW surveys. The IFPRI team led the training, with the assistance of the DCOR team. In particular, the DCOR team oversaw the logistics during the training sessions, including the coordination of and transport for multiple rounds of field visits with the enumerators.

The finalization of the study teams was conducted by IFPRI and DCOR based on the enumerator performance during the training. As per the study requirement, 18 out of 23 participants (3 Male Field Supervisors, 3 DQAs, and 12 Enumerators) were selected for the quantitative data collection and 4 out of 8 participants (2 Interviewers and 2 Note-takers) were selected for the qualitative data collection, based on their performance in interviewing the study participants during the field tests, and their understanding of the subject matter.

In total, a team of 22 persons was engaged for the data collection, and were divided into two sub-teams for the quantitative and qualitative data collection. Both the teams operated under the close supervision and guidance of the Study Coordinator and the Logistic Manager. The team compositions for the quantitative and qualitative data collection are presented in Figure 4-1.

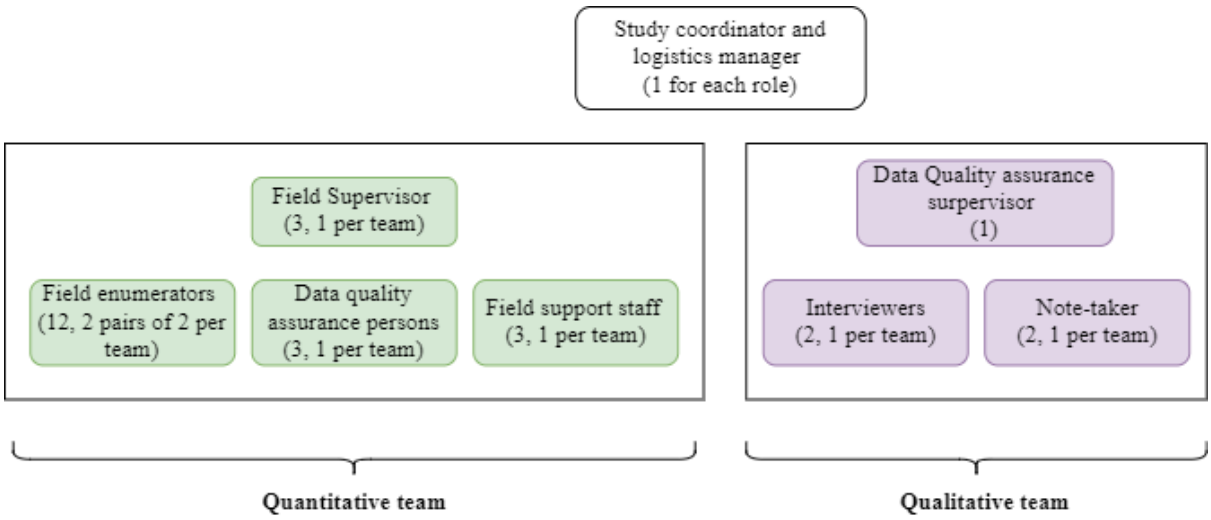

Figure 4.1 Composition of the data collection teams

4.1.3 Field data collection

The quantitative and qualitative teams collected data independently, and separate route plans were prepared for each set of teams. After discussion with DCOR, we decided that it would be logistically and operationally more convenient for all three quantitative teams to complete data collection in one block and then move to the next block. The two qualitative teams also decided to move together, but separately from the quantitative teams. The route plan prepared by the teams included the logistic and travel plan.

Data collection began immediately after the training ended. In order to bring uniform understanding on the study instruments and ensure effective management, it was decided that the entire study team would

operate from a base in Saharsa, leaving each morning for data collection and returning each evening. Each sub-team was provided a separate vehicle for data collection.

The field supervisors were responsible for locating the respondents and allocating respondents to pairs of enumerators. A data collection plan was prepared daily, after reviewing the progress made in the field on that day. Spot checks of the interviews for each pair of enumerators were conducted by the DQA, and the findings were shared with the enumerators immediately. Back-checking of interviews occurred in the afternoon of the same day. Spot-check and back-check reports were shared with the IFPRI team by DCOR on a bi-weekly basis. Through the combination of spot- and back-checks the DQA reviewed 50 percent of the household interviews. Each enumerator in a pair filled the survey independently. At the end of the day the DQA sat with the enumerators and reviewed the surveys, following which the responses were reconciled and one final questionnaire was prepared for the data entry.

As with the quantitative team, the DQA of the qualitative team also planned and reviewed the data collection on regular basis. The spot- and back-checks were shared with the team members daily to improve the quality of data collection. The DQA also reviewed the field notes prepared by the team and gave necessary feedback to improve quality. The DQA for the qualitative team also reviewed about 50 percent of all interviews though spot- and back-checks. The audio files and scanned copies of the field notes were shared with the IFPRI team through Dropbox on a real-time basis, allowing us to review the files and provide timely feedback to the data collection team. The IFPRI team also reviewed the quality and progress in data collection of each sub-team separately on weekly basis though phone calls, and ensured that the quality protocols were followed throughout the data collection. During these review meetings, challenges and difficulties faced by the teams and clarifications regarding the questionnaire were discussed and addressed.

With the rigorous system of supervision and data quality assurance, the resulting data was of high quality, and diligently and ethically collected. The spot checking and back checking done by the DQA persons helped minimize errors to less than 5 percent.

4.1.4 Targeted and achieved sample

Table 4.2 indicates the targeted sample size as well as the achieved sample size at the end of the data collection process. The targeted sample size differs from the PE protocol for two reasons – first, some numbers were updated to reflect the exact numbers of respondents based on the baseline data, second, some revisions to the list of interviewees were made as per communications with the World Bank during the pre-testing of tools (please see the table notes for specific details, and Section 2.2 for further information on updates to the intervention).

All the interviews with the study participants were conducted only after obtaining free informed consent from the study participants. Prior appointments were taken for the interviews with key cadres like the CMs and VRPs. The study did not provide any cash or in-kind compensation and this was explained to the participants during the informed consent process. The qualitative interviews were digitally recorded on a portable digital recorder only after obtaining informed consent from the study participant.

As can be seen from the table, DCOR interviewed 93 percent of the target households in the treatment arm, and 89 percent of the target households in the control arm, for an overall achieved sample that was slightly over 90 percent of the targeted sample. The reasons for attrition of households were the following:

30 respondents went to their parental home

12 respondents migrated to different places with their family members in search of work

10 respondents could not be traced

5 respondents were married and staying at the home of their parents-in-law

1 respondent was out of her village for work and to attend the wedding of relatives

1 went to appear for an examination and did not return during the study period

1 went to Uttar Pradesh for medical treatment

1 was not alive.

We achieved our target sample for the PCs, VO executive committees and the AWWs. The reasons for not achieving the target samples for the other respondents are given below:

One CM had resigned from her job but no new appointment had been made at the time of the data collection.

One VRP had gone to her parents' home for delivery. Three VRPs had not been appointed at the time of data collection – two in Ajgaiba and one in Saur Bazaar.

One ASHA was looking after two villages, Suthaniya and Suthaniya-II.

Table 4.2: Methods, targeted and achieved sample sizes for each respondent

	Data collection method	Treatment		Control	
Respondent		**Target**	**Achieved**	**Target**	**Achieved**
Households	Mini-survey	308	286	305	268
CMs	Structured interview	15	14	12	12
Village Resource persons (VRPs)	Structured interview	9	7	9	7
AWWs	Structured interview	17	17	16	16
ASHAs	Structured interview	17	16	16	16
SHGs	Observations of meetings	30	28	-	-
Procurement Committee	Structured interview	9	9	9	9
VO executive committee	Structured interview	9	9	9	9

Notes:

1. IFPRI had proposed to interview also members of the FSC, but it was found that this is not a standing committee and is constituted at the time of purchases only.
2. It was also proposed in the protocol that we interview members of the health sub-committee (HSC) but this was revised during the pre-test based on their having had limited experience in their roles.
3. The numbers for the household, CM, ASHA and AWW target interviews are based on the achieved sample from the baseline survey.
4. We aimed to observe 2 SHG meetings per CM in the treatment arm – so with the achieved sample size of 14 CMs the target number of SHG observations was 28.

In addition to these changes, it was found that three CMs interviewed at baseline had been replaced by new individuals. These new CMs were interviewed as part of the PE.

In addition to the respondents listed in Table 4.2, the IFPRI team also conducted interviews with JEEViKA staff from the state-level downwards, and with select JEEViKA Technical Support Program (JTSP) staff. Verbal consent was taken from each respondent prior to interviewing them. The interviews were also recorded on voice recorders with the full knowledge and consent of the interviewee. On only one occasion did an interviewee request that their interview not be recorded, and their request was adhered to.

The list of actors interviewed in this manner included the State Project Manager (SPM) Health and Nutrition, the Project Manager (PM) Health and Nutrition, the DPM, the thematic managers for health and nutrition and for social development, the three Block Project Managers (BPMs), three Area Coordinators (ACs), four Community Coordinators (CCs), three Livelihoods Specialists (LHS), two Master Trainers (MTs) and three Block Health, Sanitation and Nutrition Integrators (BHSNIs). We also

interviewed the two World Bank (WB) consultants in Saharsa. In total, we conducted 25 interviews in this manner. All interviews were transcribed by IFPRI staff from the audio recordings and accompanying notes.

4.2 Data entry, cleaning, and analysis

Based on the paper questionnaires, DCOR developed Computer Assisted Program interface (CAPI) programs for all the quantitative data. The data from the paper questionnaires was entered into digital form using tablets loaded with the CAPI programs. The digitized data was shared with the IFPRI team, who cleaned and checked the data. Any discrepancies were noted and fixed by the DCOR team over multiple iterations of data cleaning. The quantitative data was cleaned and analyzed using Stata 14, and responses were tabulated in preparation for the report.

The open-ended responses, SHG observations and the qualitative interviews were entered into Word documents which were shared with the IFPRI team. We then translated these responses from Hindi into English. Based on the research questions for the PE analysis matrices were developed for all interviews (including those for the JEEViKA staff and WB consultants), and the data was summarized into various themes using these matrices. The summarized data was then converted into a textual narrative that described the relevant pieces of information from each type of respondent.

We now move to the presentation of the results. We start with the enabling environment for implementation (Chapter 5), followed by a discussion of whether the implementation platforms are in place (Chapter 6). Chapter 7 looks at the results from the implementation of the BCC component, while Chapter 8 studies the implementation of the convergence and coordination component. Chapter 9 presents the results on household exposure to and knowledge of messages, and Chapter 10 discusses the utilization of JEEViKA platforms and government services, as well as actual health, nutrition and sanitation-related practices by the household.

Please note that in all subsequent chapters we will refer to the number of respondents giving a particular answer using the notation *"n=xx"*, i.e. with a lower-case *n.* For the total sample sizes of each type of respondent (denoted by upper-case *N*) we refer the reader to Section 4.1.4 and Table 4.2 in the previous chapter.

Summary

- For the purpose of the process evaluation, six GPs were selected for the process evaluation, three from the treatment arm (Ajgaiba, Mokma and Pama), and three from the control (Saur Bazaar, Baraith, Dhabauli South).
- IFPRI partnered with DCOR Consulting Pvt Ltd (DCOR) for the collection of data for the process evaluation.
- IFPRI and DCOR conducted two rounds of pre-testing of tools –Phase I on 12th and 13th April 2017, and Phase II from 4th to 6th May, 2017. The pre-tests were aimed at capturing the amount of time taken by each tool, the translation and use of local terms, and the ease with which respondents understood the questions as phrased. After the pre-tests the tools were revised based on the feedback provided by the teams.
- DCOR was responsible for locating and contacting potential enumerators and managing the training logistics. Intensive classroom and field training of both the quantitative and qualitative study teams was undertaken (in parallel sessions) from May 8th to 18th, 2017. The finalization of the study teams was based on the enumerator performance during the training. In total, a team of 22 persons was engaged for the data collection, and were divided into two sub-teams

for the quantitative and qualitative data collection and operated under the close supervision of the study coordinator and the logistics manager.

- Data collection began immediately after the training ended. Spot-checks and back-checks were conducted in a timely manner and reports were shared with the IFPRI team by DCOR on a bi-weekly basis.
- In addition, for qualitative data collection audio files and scanned copy of the field notes were shared with the IFPRI for review and timely feedback.
- With the rigorous system of supervision and data quality assurance, the resulting data was of high quality, and diligently and ethically collected.
- The achieved household sample was slightly over 90 percent of the targeted sample. The main reasons for attrition of households were: returning to parental home, migration in search of work, and, some households could not be traced.
- Targeted samples were achieved for the PCs, VO executive committees and the AWWs. The reasons for not achieving the target samples for the other respondents were: resignations from position, no one currently appointed to position, and one FLW working across multiple villages.
- The IFPRI team also conducted interviews with JEEViKA staff from the state-level downwards, and with select JTSP staff. Verbal consent was taken from each respondent prior to interviewing them. The interviews were also recorded on voice recorders with the full knowledge and consent of the interviewee.
- Quantitative data was entered into a computer assisted program interface and the datasets were shared with IFPRI. The IFPRI team undertook cleaning and checking of the data and any discrepancies were resolved. All the quantitative data was cleaned and analyzed in STATA 14.
- The open-ended responses, SHG observations and the qualitative interviews were entered into word documents by the DCOR team. The IFPRI team translated, analyzed and summarized these data.

5. Enabling environment for implementation

One of the ways the PE sought to study the implementation was by mapping the different steps of the process across time, also known as process tracing [Refer to Figure A-1 in Appendix]. This process tracing map, along with interviews of JEEViKA staff members, provided information on several pertinent issues influencing implementation.

5.1 The implementation core of the pilot

The MC pilot sought to achieve several individual and community level outcomes but it was not apparent how it would accomplish this. A feasibility study was carried out from March 2014 to December 2015 in Saur Bazaar, but the activities within the feasibility study were very different from the activities that were eventually implemented in the pilot. For example, in the feasibility phase there was direct engagement with VHSND activities, and an emphasis on demonstrating hand-washing. The pilot, however, included a different set of activities that were deemed relevant based on its aims. Thus, the scope for learning from the feasibility phase was limited.

The feasibility study involved dissemination of health and nutrition BCC through a dedicated cadre, the JEEViKA Saheli. Due to budgetary constraints, this cadre was discontinued before the MC pilot began, and these responsibilities were instead given to an existing cadre, that of the CM. This put the pilot at a disadvantage as the CMs already had other responsibilities, and were not adequately trained to take on these new tasks. The HSC was added to relieve some of the workload pressure from the CM, and a Community Resource Person (CRP) drive was conducted towards the end of 2016 in order to get HSC members to carry out some of the tasks that were conceptualized for them. These kinds of additions and modifications, even though they were implemented to address constraints within the pilot, could have adverse impacts on the intended outcomes of the pilot due to lack of clarity of roles, lack of training and/or capacity which may result from this very ad-hoc nature of these “fix-ups”.

5.2 Implementation timeline

Time lags of various types were observed in the process tracing, and we attempt to describe the most important ones here. First, there was delayed implementation of some activities that were included as part of the pilot, with different components being implemented at different stages, instead of all of them being executed from the beginning. For example, while the BCC roll-out began immediately after the end of the baseline survey, the formation of convergence committees and activation of community events all occurred in a staggered manner, with delays in the execution of orders to form committees such as the Panchayat level convergence committee.

Second, while the BPMs, ACs and CCs were oriented about their responsibilities in the JEEViKA-MC pilot in May 2016, they were only given formal training on the H&N BCC being rolled out as a part of this pilot in February 2017. These three JEEViKA personnel are responsible for monitoring the work taking place on the field and their lack of technical knowledge for six to seven months into the pilot might have impacted their ability to monitor activities, as well as their engagement with the pilot.

Third, the HSC’s first training on their roles and responsibilities by the MT and BHSNI began in September-October of 2016 but was only completed by December 2016. Eventually the Nutrition CRPs (NCRPs) were hired to perform the second round of training which was spread over March to July of 2017. The considerable delay in training this committee led to some components of the program being pushed back, such as home visits and active participation of the HSC in ICDS events (Annaprashan and Bachpan Diwas).

Finally, the roll-out of modules has also taken more time than anticipated in the timeline. Interviews with staff revealed that agricultural seasons, festivals and other government programs have affected the

timeline. Going forward, it is important to fully account for disruptions of this kind while planning detailed timelines for activities.

5.3 Awareness of the MC pilot among the JEEViKA staff

Overall JEEViKA and JTSP staff awareness of the purpose of the pilot and the activities included within it was quite high. The supervising staff (BPM, AC and CC) seemed very aware of the BCC component of the MC pilot. Most of them mentioned the modular training of CMs, which is then imparted to SHG women. These staff members were also aware that the messages targeted women and children in the 1000-day window. Individual responses included different aspects of the MC pilot such as demonstration of hand-washing and preparation of *poshak laddoos* (nutritious food for pregnant and lactating women), encouraging women to cultivate kitchen gardens, organization of community events, and home visits by HSC. Only one of the staff members mentioned the formation of convergence committees in their description of the pilot.

The prioritization of pregnant and lactating women and the aspect of convergence is more coherent to the district level managers (the DPM and the thematic manager for health and nutrition). The district and state level managers also took cognizance of the logistics of implementation of the pilot and mentioned the use of existing JEEViKA platforms and cadres to carry out the objectives of the pilot.

The MT and BHSNI's understanding of the MC pilot includes the dissemination of messages on health and nutrition through the CM and HSC. They are also aware of message delivery through community events and the attempt to coordinate between different sectors through the convergence committees.

Each of the three LHS interviewed (two of which are still working in this capacity) revealed some pieces of information about the MC pilot, e.g. around the role of the VRP in promoting kitchen gardens, and the functioning of the block level coordination committees. But the understanding of the full set of objectives of the pilot seemed incomplete. Understandably, there was a greater emphasis on diet diversity and kitchen gardens in their interpretation.

5.4 Workload and commitment to the pilot

The activities under the MC pilot are only one component of the multiple tasks of the JEEViKA staff at all levels. They also have to implement and overlook activities under different themes. As one BPM put it, *"...if it is possible there should be a cadre at panchayat level which is dedicated to HNS, just like the one being started at Cluster level. Because the JEEViKA employees have a lot of work and they have pressure on them. They are unable to work on one theme in a focused manner."*

The performance of JEEViKA staff and cadres is not reviewed on the basis of the outcomes of activities specific to the pilot, which reduces their incentive to work on those activities. Until the training conducted in the district headquarters in February 2017 on technical aspects of health and nutrition and a refresher of their responsibilities in overseeing the dissemination of the health and nutrition information, the staff members did not feel a sense of ownership towards the project and its outcomes. To some extent the MC pilot was seen as the responsibility of external agents on the field, and there was limited system-wide commitment to the pilot in the initial months of its implementation.

5.5 Staff shortage

At the time of conducting interviews it was noticed that there is a marked disparity in staff presence in some blocks. In several places, staff had resigned or been shifted to another GP or block but new appointments had not been made in their place. The recent shuffling of staff to bring more able persons to the treatment arm, or to help with the pilot, has left unfilled vacancies in several places, to the detriment of program implementation. For example, the LHS from Pattarghat was appointed as the

District Manager of Livelihoods, but his vacant post in the block had not been filled at the time of the PE.

The limited staff presence directly affects implementation of an intricate program such as this which requires constant field support. Two instances of staff shortage are worth mentioning. First, since Pattarghat is the most far-flung block. there has been some reluctance among staff (especially female staff) to work there. While there were eight CCs in Sonbarsa and nine in Saur Bazaar, there were only two in Pattarghat at the time of the evaluation. As a staff member from Pattarghat said,

"Just the BHSNI and I are not enough to do this work. Earlier there was the JEEViKA Saheli. Now some work gets left because there are so many responsibilities. Health and nutrition is not our only task. If we have more staff then we would be able to perform better. Sometimes we forget some tasks or get busy with one activity at hand. We are not able to adhere to our timetable."

Similarly, in Saur Bazaar it was noticed that there weren't enough VRPs in the VOs. This was mentioned by a CM from that region, as well in a discussion on kitchen garden uptake by SHG women. A report prepared by the WB consultants in Saharsa in February 2017 also showed that there was an acute shortage of VRPs in the treatment GPs of the three blocks - there were only 56 VRPs employed at that time and an additional 48 were required.

5.6 Workload of the Community Mobilizer

With different activities being added to the JEEViKA program overall, and to the MC pilot in particular, the responsibilities of the CM have been steadily increasing. While initially performing the role of a book-keeper, the CM was subsequently entrusted with the dissemination of the health and nutrition BCC in an attempt to use existing manpower in light of limited resources. Besides this, the CM has been given a series of additional tasks because of her easy access to the community women. The process evaluation revealed that the CMs have been conducting a household level survey under the Total Sanitation Campaign (TSC) which has been onerous for some of them since they it is difficult to find family members at home during the day. Some CMs also said that they found it difficult to convince SHG women to begin toilet construction in their homes using their own money as a part of the Open Defecation Free (ODF) campaign. The CMs are required to maintain household demographic profiles, and were also involved in an annual life insurance sign-up drive which was disruptive to the regular proceedings of SHG meetings and diverted attention from discussions around health and nutrition. In addition, as part of the pilot the CM has been asked to increase household awareness of and participation in community events such as Annaprashan and Bachpan Diwas, and to help VRPs with dissemination of the video messages created by Digital Green. All of this is in addition to her original duties of recording savings and lending and assisting members in accessing funds.

Almost all the CMs interviewed (n=22) said that their workload had increased in the past one year. Of the four who didn't experience this change, three were working in the control arm.[1] The tasks that take up most of the CMs time were facilitating SHG meetings, book-keeping of savings and lending activities, and providing information about health and nutrition to SHG women. Five of the twenty-six respondents also mentioned their tasks under the ODF drive. In this context, adding additional tasks to their portfolio and constantly changing priorities simply increases their burden and affects their routine activities.

The training of the HSC is meant to reduce the burden of the CMs, as they are expected to take on tasks that would otherwise have been delegated to the CM, such as home visits, engagement with community

[1] Other control arm CMs said that the tasks that increased their workload were the survey on toilet construction (n=2), a greater number of SHGs to supervise (n=2), more registers to fill (n=2), and longer meetings (n=1).

members in ICDS events, organizing peer group meetings and demonstrating preparation of nutritious snacks and infant feeding practices. However, the HSC was not fully functional at the time of the process evaluation. Since the HSC members are not required to have a minimum level of education (unlike the CM, who must be 8th pass) and are volunteers, issues such as low levels of literacy and lack of incentive are expected to hamper the efficacy of this committee.

5.7 Other barriers to implementation

5.7.1 Training

Several issues were raised regarding the training of the CMs. First, some of the CMs have to travel large distances to attend the training. As a result, they arrive late and leave early, thereby reducing the effective duration of the training. Second, some CMs bring their children to the training sessions, and this is a source of distraction. Third, the space provided to conduct the training is small, which limits its usefulness, especially when the trainers have to conduct games. Suggestions were given about organizing residential trainings.

5.7.2 BCC content

The BCC content used in the pilot is prepared by the JTSP, and then modified by the WB consultants in order to make it more detailed or more relevant to the focus areas under the MC pilot. The MTs and BHSNI are trained on the JTSP content at a central location, and then provided with additional training by the WB consultants on the adapted content. They are then expected to train the CMs on the pilot-specific content material. The trainers receive some printed material from the JTSP/ PCI and additional material from the World Bank, such as posters.

The BCC content used in the pilot was made available to IFPRI and its content was reviewed in comparison to the WHO module on maternal and child health and nutrition, IYCF practices, morbidity and family planning and the ASHA module from the National Health Mission (NHM).[2] Table A.2 provides the comparison of these modules. As can be seen from the table, the JTSP BCC content is accurate and comprehensive, and contains many of the messages that are in the ASHA training modules. In terms of completeness, therefore, the material is adequate.

Despite this completeness and accuracy of information, we identified two potential problems with the BCC content. First, providing two separate trainings on similar and yet slightly different BCC content (by JTSP and the WB) to the same sets of MTs and BHSNIs could possibly lead to confusion and to inconsistencies in the messages being delivered. This is a barrier to implementation. Second, as Table A.2 shows, there is a great deal of overlap in the content of the MC pilot and that of the WHO and ASHA training modules. This means that the messages that are being delivered by the CM are generic, and could be reaching the households through several other channels. This is likely to dilute the measured impact of the intervention, which assumes that the control arm is not receiving these messages from another source.

Our final comment is on the costs and benefits of developing additional training material when existing modules contain much of the information used in the BCC messaging of this pilot, and in some cases, are even more detailed. We are referring here not only to the government ASHA training manuals, but also to the original CHETNA BCC modules, which contained much of the same content as the current JTSP BCC. In addition, the CHETNA modules were visually more appealing, had pictures that could be used as visual aids in the dissemination of information, and attempted to script the interaction of the JEEViKA Saheli with the SHG, directing her to conduct certain activities at certain points along the module. All of these aspects made the dissemination of information more interesting and interactive.

[2] See http://nhm.gov.in/communitisation/asha/resources/asha-training-modules.html (books 6 and 7).

When assessing the cost effectiveness of the pilot, this is one aspect that needs to be kept in consideration.

Summary

- The feasibility study carried out from March 2014 to December 2015 was not completely applicable to the MC pilot due to changes in focus around messages and the implementation modality - shift from a dedicated cadre of the JEEViKA Saheli to an existing cadre, that of the CM, and, creation of a completely new committee, the HSC, to relieve the workload pressure from the CM.
- There was delayed implementation of some activities that were included as part of the pilot. For example, the formation of convergence committees and activation of community events occurred in a staggered manner due to delays in the execution of official orders.
- Many of the higher-level staff received formal health and nutrition training only 8-9 months into the implementation, which may have affected their ability to monitor the BCC activities, and their engagement with the pilot.
- The HSC's first training on their roles and responsibilities was delayed, as was the hiring and training of the NCRPs. This subsequently led to delay in some components of the program, such as home visits and active participation of the HSC in ICDS events.
- Among JEEViKA and JTSP staff, knowledge of the purpose of the pilot, its target population, and the activities proposed is reasonably good. The BPMs, ACs and CCs seemed very aware of the BCC component of the MC pilot. However, their knowledge of the convergence and coordination component is quite poor. Among the LHS interviewed, knowledge about the MC pilot seemed incomplete.
- The activities under the MC pilot are only one component of the multiple tasks of the JEEViKA staff at all levels. Their performance is not reviewed on the basis of the outcomes of activities specific to the pilot which reduces their incentive to work on those activities.
- At the time of conducting interviews, staff scarcity due to resignations and lags in filling those positions was noticed in some blocks. The limited staff presence directly affects implementation of such an intricate program which requires constant field support.
- The responsibilities of the CM have been steadily increasing. CMs now conduct a range of activities in addition to their role as bookkeepers and disseminators of H&N information. Almost all CMs in both arms responded that their workload had increased in the past one year.
- The training of the HSC is meant to reduce the burden of the CMs, as they are expected to take on tasks that would otherwise have been delegated to the CM, such as home visits, engagement with community members in ICDS events, among other tasks. But low levels of literacy and lack of incentives are expected to hamper the effectiveness of this committee.
- Several training related issues were raised, e.g. the distance CMs have to travel to attend, distractions during the SHG meetings, and space constraints that limit activities that can be conducted. Residential trainings were suggested.
- A comparison of the BCC content under the pilot and the WHO modules and ASHA training manuals found that there was considerable overlap in content, meaning that households in the control arm could be receiving these messages from multiple sources. This could dilute the impacts of the intervention.

6. RESULTS: Implementation platforms

6.1 Availability and functioning of critical implementation platforms

SHGs and VOs have been formed and are functional, even as new SHGs continue to be formed. The task of forming the new SHGs and federating them to higher level federations does in some cases hinder work on other fronts, as in the case of the MC pilot-related work, but since this is the main mandate of the JEEViKA program this work will continue.

About 68 percent of our sample belonged to an SHG (Table 6.1). Individuals in the control arm had a slightly higher number of years of membership in SHGs (3.1 vs 3.0, $p<0.05$). Nearly all (98.6 percent) of the SHGs had savings and credit activities, and 97.8 percent of the individuals participated in those activities. These proportions were not significantly different across arms. In the SHG meetings observed, it was found that a meeting lasts an average of 50 minutes.

Table 6.1: Individual participation in SHGs

	Treatment arm		**Control arm**		**All**		**p-value**
	Mean (SD)/ Proportion	**N**	**Mean (SD)/ Proportion**	**N**	**Mean (SD)/ Proportion**	**N**	**T vs C**
Currently belongs to an SHG	67.1	286	69.2	266	68.1	552	0.83
Length of time as SHG member (years)	3.0 (1.6)	192	3.3 (1.9)	184	3.1 (1.7)	376	0.05*
Someone else in the family belongs to an SHG	52.7	258	42.0	231	47.7	489	0.14
SHG has savings and credit activities	98.4	190	98.9	174	98.6	364	0.658
Respondent participates in these savings and credit activities	97.9	187	97.7	172	97.8	359	0.777

Source: Authors' calculations. Note: * indicates p-value <0.05.

Box 6.1: Comparing SHG membership status across Baseline and PE

We compared the sample at the time of the PE with the same set of individuals at the time of the baseline survey in May-June 2016. The SHG participation rate at baseline was 70.5 percent. There are 55 individuals (9.9 percent) who reported being part of an SHG at baseline but are no longer part of an SHG, and 42 individuals (7.6 percent) who were not part of an SHG at baseline but report currently being part of an SHG. A slightly higher proportion of the individuals in the treatment arm who reported being part of an SHG at baseline were no longer in SHGs at the time of the PE (Table 6.2, 16.3 vs 11.9 percent), but otherwise the numbers are comparable across treatment and control arm.

Table 6.2: Comparison of SHG membership status at baseline and at the time of the PE

	Treatment (N=286)		Control (N=266)	
	Did not belong to an SHG at baseline	Belonged to an SHG at baseline	Did not belong to an SHG at baseline	Belonged to an SHG at baseline
Do not currently belong to an SHG	61	33	60	22
Currently belong to an SHG	22	170	20	164

Source: Authors' calculations.

Procurement Committees

PCs appeared to be in place and to be functional in both treatment and control arm. We interviewed nine members of the PCs in both treatment and control arm. In the treatment arm, there was one village where procurement had only happened once. Almost all of the procurement seems to have been of food grains, mostly rice. Only 3 PC members reported also having purchased seeds - in one committee they purchased seeds for 11 different types of crops, in another, they bought seeds for 5-coloured vegetables. All other respondents (6 in total) reported that no seeds had been bought at the time of the interview. Awareness of the rules of repayment of money such as the time period of repayment and the rate of interest charged was good. The majority of treatment arm respondents (n=6) mentioned the grace period of three months after which the money has to be returned. Some (n=2) also mention the interest rate of 2 percent.

In the control arm the members were aware of their roles and committees seemed to be in place, however there was one case where procurement had only happened once, about four years ago, and another case where it had been two years since anything was bought because the CM has not been attending the SHG meetings regularly. In another case the committee had only purchased a machine, but not any food items. Similar to the treatment arm, awareness of the rules of repayment was good. A majority (n=7) of the respondents mentioned the time period of repayment.

Community events

We study two community events, the Annaprashan Diwas and the Bachpan Diwas, both organized under the ICDS. The Annaprashan Diwas is held once a month, and provides information about complementary feeding to mothers along with demonstrations of handwashing and feeding children. The Bachpan Diwas is held every Saturday, and provides information on infant and young child feeding practices, demonstrations of recipes like for *poshak laddoos*, and the reinforcement of other health and

nutrition messages, e.g. handwashing. Each Saturday a different group of women meet at the Bachpan Diwas for peer group meetings – pregnant women one week, lactating women one week, adolescent girls and so on.

Slightly less than 50 percent (49.8) of the households reported that they had heard of the Annaprashan Diwas, and 32.2 percent of the households reported that they had heard of the Bachpan Diwas. However, among those who reported having heard of these events, a large proportion - more than a third in both cases - did not know how many times the event had been held in the last three months (Figure 6.1). Only about 15 percent of the respondents who had heard of it reported that the Annaprashan Diwas was being held on average once a month (or three times over the last 3 months). About a third of the respondents who had heard of the Bachpan Diwas said that it had only been held once over the last 3 months. None of these proportions were significantly different across the treatment and control arm.

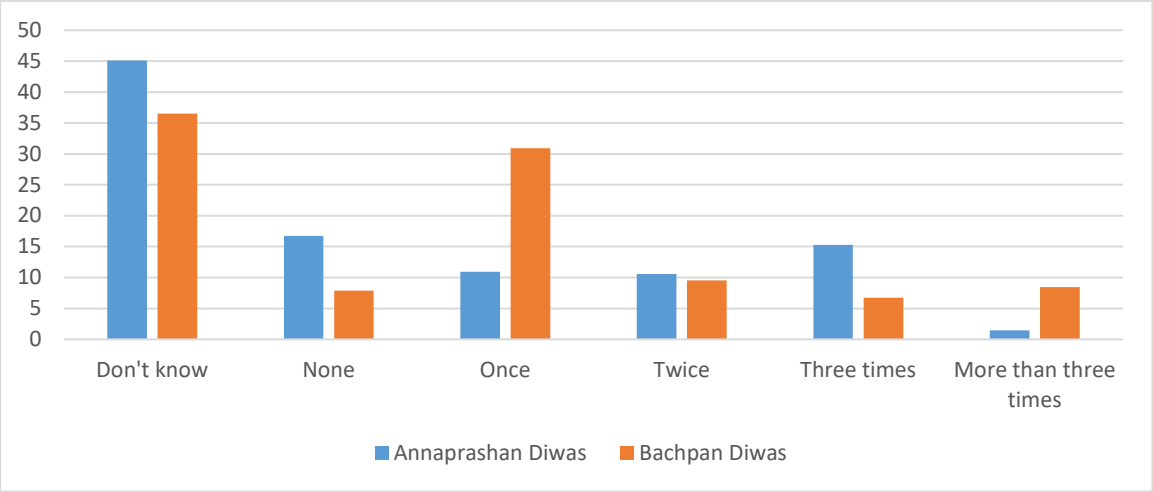

Figure 6.1 Number of times community events have been held in the last 3 months (household responses)

Table 6.3 reports the participation of the respondent woman and her baby in the Annaprashan and Bachpan Diwas. With the caveat that the mother might not have a child of the appropriate age group to attend the Annaprashan Diwas, we can see that participation is quite low.[3] The numbers in each area are small so we do not report the statistical tests in the table. The proportion reporting the availability of services at the Annaprashan Diwas is not different across the two arms. However, in the case of the Bachpan Diwas, a much higher proportion of women in the treatment arm report the provision of services such as group meetings for women, counselling and demonstration of handwashing with soap, preparation of *poshak laddus*, demonstration of feeding with a bowl, and counseling and demonstration of the proper methods of cooking. It seems that while the levels of awareness of these events is more or less the same in both arms, the range of services being provided at the Bachpan Diwas might be different. We do want to emphasize that the sample sizes are too small for us to assign any statistical significance to this.

[3] We additionally ask about participation of any other household member (not just the respondent woman) but the proportion of households that reported that someone other than the respondent woman had participated in either the Annaprashan or the Bachpan Diwas was negligible.

Table 6.3: Household responses on participation in community events and services provided

	Treatment arm Proportion	Control arm Proportion	All Proportion
In last 3 months, respondent woman and her child participated in Annaprashan Diwas (N=143, 132, 275)	15.38	14.39	14.91
Services received at Annaprashan Diwas (N=22,19,41)			
Counseling and demonstration of handwashing practices	95.45	94.74	95.12
Counseling and demonstration of initiation of semi-solid and solid foods in young infants	95.45	94.74	95.12
Counseling and demonstration of meal frequency, quality and quantity for children aged 6-8 months through bowls and thickness of food	90.48	94.74	92.5
Counseling and demonstration of diet diversity	90.91	94.74	92.68
In last 3 months, respondent woman and child participated in Bachpan Diwas (N=95, 83, 178)	22.11	10.84	16.85
Services received at Bachpan Diwas (N=21, 9, 30)			
Group meetings for pregnant women	76.19	33.33	63.33
Counseling and demonstration of hand washing with soap	90.48	55.56	80
Counseling and demonstration of quantity, quality and frequency of diversified food for pregnant women	76.19	66.67	73.33
Preparation of nutritious snacks (eg. poshak laddus) for pregnant women	76.19	44.44	66.67
Demonstration of feeding with bowl to explain quantity and frequency and quality with thickness	76.19	44.44	66.67
Counseling and demonstration of ORS preparation	52.38	44.44	50
Demonstration and counselling of positioning and attachment for breastfeeding	61.9	44.44	56.67
Counseling and demonstration of proper method of cooking and ways to enhance nutritional value of food	66.67	44.44	60

Source: Authors' calculations.

A majority of CMs (n=9) in the treatment arm had heard of Annaprashan Diwas, compared to only 3 in the control arm (Table 6.4). Of the control arm CMs who had heard of the event, none of them knew the frequency at which it was held, the services provided, or the participants. In contrast, half the CMs (n=7) in the treatment arm said the Annaprashan Diwas was held once a month, and 2 said once a week. The main services reported were counselling and demonstration of initiation of semi-solid and solid foods in young infants (n=7), counseling and demonstration of handwashing practices (n=2), counseling and demonstration of feeding for children aged 6-8 months (n=2), and counseling on dietary diversity (n=2). The two main groups of participants were pregnant and lactating women (n=7), and grandmothers (n=5).

Table 6.4: CMs awareness of community events (Annaprashan and Bachpan Diwas)

	Treatment arm	**Control arm**
Annaprashan Diwas		
Awareness (N=14, 12)	9 CMs had heard of the Annaprashan Diwas	Only 3 CMs had heard of this event
Frequency (N=9,3)	7 CMs reported that it was held once a month. 2 said once a week.	2 did not know, and 1 said it had never been organized.
Services provided (N=9,3)	The main services reported were counselling and demonstration of initiation of semi-solid and solid foods in young infants (n=7), counseling and demonstration of handwashing practices (n=2), counseling and demonstration of feeding for children aged 6-8 months (n=2), and counseling on dietary diversity (n=2).	2 CMs said they did not know of any services.
Who participates?	Pregnant and lactating mothers (n=7), grandmothers (n=5), children aged 6 mo-2 years (n=3), children under 6 months (n=2), adolescent girls (n=1).	The 2 CMs did not know who participated.
Bachpan Diwas		
Awareness (N=14, 12)	11 CMs had heard of the Bachpan Diwas	Only 4 CMs had heard of the Bachpan Diwas
Frequency (N=11,4)	3 CMs reported once a week, 6 said once a month. 2 did not know.	3 did not know. 1 said it was held twice a year.
Services provided (N=11,4)	The services reported were counselling and demonstration of handwashing (n=4), information on complementary feeding (n=4), counseling and demonstration of quantity, quality and frequency of diversified food for pregnant women (n=3), preparation of *poshak laddus* (n=3), and demonstration of feeding with bowl to explain quantity, frequency and thickness (n=2). Noone mentioned peer groups for pregnant women.	The only service reported was the provision of biscuits, chocolates and halwa. 3 CMs did not know of any service.
Who participates?	Pregnant and lactating mothers (n=7), grandmothers (n=5), children aged 6 mo-2 years (n=2), adolescent girls (n=2), children under 6 months n= (2), children aged 2-5 years (n=1).	Pregnant or lactating mothers (n=2), children aged 6 mo-2years (n=2), children under 6 months (n=1) and children aged 2-5 years (n=1).

Source: Authors' calculations.

Eleven CMs of the treatment arm had heard of the Bachpan Diwas, compared to only 4 of the control arm CMs. The control arm CMs who had heard of this event did not know the frequency or the services being provided, but reported that the participants were pregnant or lactating women (n=2), and young children of various age groups. 3 of the treatment arm CMs reported that the Bachpan Diwas was held

once a week, while 6 others said it was held once a month. They described several services - counselling and demonstration of handwashing (n=4), information on complementary feeding (n=4), counseling and demonstration of quantity, quality and frequency of diversified food for pregnant women (n=3) and preparation of *poshak laddus* (n=3). In contrast to the households, none of the CMs mentioned peer groups for pregnant women. The main participants reported were again pregnant and lactating mothers (n=7) and grandmothers (n=5).

Various JEEViKA staff members (one CC, two ACs and one BPM) mentioned these community events and the population they target. The opinion of the JEEViKA staff at the district and state level is that the events are being routinely organized and there is active participation in them.

One Master Trainer mentioned conducting peer group meetings for pregnant and lactating women in Bachpan Diwas. Another Master Trainer mentioned that CNRPs have supported HSC members at these events, and have conducted peer group meetings at the Bachpan Diwas with pregnant and lactating women and their mothers-in-law. All the BHSNIs mentioned these events as a part of the model and one of them also spoke about their role in it. This suggests that these events are being held with some regularity, though of course it does not tell us if they are organized with the same frequency in every village, and if there is the same level of participation by cadres and staff everywhere.

From the household, CM and JEEViKA staff awareness of these community events, we can conclude the following: (1) awareness of the events seems considerably higher in the treatment arm than in the control arm, especially among the CMs, (2) the events do not seem to be held at the frequency at which they were intended, perhaps more so in the case of the Bachpan Diwas, which appears to be held once a month instead of once a week, and (3) it would appear that some services are indeed being provided, but that there is variability in what is reported by the CMs, and what the households report having received. We should emphasize that overall household awareness is very low.

6.2 Staff knowledge of roles and responsibilities

This section looks at the various key actors in the JEEViKA-MC pilot to answer the question of whether these key actors are aware of their roles and responsibilities within the pilot. We present the results by actor.

Community Mobilizers

CMs in both the treatment and control arms have completed at least 11 years of education and have been working as CMs for nearly 2.5 years (Table 6.5). This should ideally make their tasks of book-keeping of savings and lending activities in the SHG and recording the proceedings of meetings much easier. Not all the CMs are SHG members; only eight out of the fourteen CMs in the treatment arm and 11 of the 12 CMs in the control arm are members of an SHG.

On average, one CM serves 10 to 11 SHGs. The CMs in the treatment arm reported spending 4.3 hours every day in carrying out their duties while those in the control arm reported spending 3.4 hours. Across arms, facilitating SHG meetings is the most time-consuming task of the CM, followed by book-keeping of savings and lending activities. This suggests that scheduling a meeting and ensuring attendance of members might be diverting more of the CM’s energy than it should.

Table 6.5: CM's characteristics

	Treatment arm (N=14)	Control arm (N=12)	All (N=26)
	Mean (SD)/ Count	**Mean (SD)/ Count**	**Mean (SD)/ Count**
Years of schooling completed	11.57 (1.55)	11.33 (2.1)	11.46 (1.79)
Engagement in income generating activities	6	4	10
What income generating activity? (N=6, 4, 10)			
Community Mobiliser	4	1	5
Agricultural labor on own land	1	1	2
Self-employed in business	0	3	3
Other	1	0	1
CM is member of SHG	8	11	19
CM tenure/experience (months)	30.64 (25.99)	31 (23.92)	30.81 (24.56)
Number of SHGs under CM	10.29 (2.4)	11.58 (2.19)	10.88 (2.36)
Approx. no. of hours spent working as CM in a day	4.29 (1.14)	3.38 (1.46)	3.87 (1.35)
Top 3 tasks that take most of CM's time			
Primary - facilitating SHG meetings	9	5	14
Secondary - book-keeping of savings and lending activities (N=11, 8, 19)	6	5	11
Third - providing information about health and nutrition to SHG women (N=10, 4, 14)	3	1	4

Source: Authors' calculations.

CMs were asked about two types of trainings – one, a more general training on their roles and responsibilities as bookkeepers and facilitators of SHG meetings, and the other, health and nutrition BCC training which is specific to the MC pilot. While CMs in both the arms have been trained on their roles and responsibilities, only the CMs of the treatment arm have been given specific training on health and nutrition messages. When asked about having received any training in general, a majority of CMs in the treatment arm (n=12) responded in the affirmative, and most of these CMs (n=10) found the training to be sufficient (Table 6.6). In the control arm, eleven CMs said they had received training and nine of them were satisfied with it. But half of the control arm CMs (n=6) felt that additional training would help facilitate their work.

CMs are trained on the health and nutrition BCC by the MT and BHSNI of their block, with additional support from the World Bank consultants, where required. According to the BHSNIs and MTs, CMs are trained for two days on each module. As would be expected under the MC pilot, CMs of the treatment arm have been trained on the health and nutrition BCC (Table 6.7). Slightly more than half of the treatment arm CMs who had received training (n=8) reported that they did not require further assistance while four CMs felt they needed more training. The treatment arm CMs who had received training (n=12) had been trained on pregnant woman's food and care, antenatal care (ANC), preparations for complications during pregnancy, birth preparedness, care of newborn, and importance of food and diet diversity in the last 12 months. The CMs in the control arm had not been trained on health and nutrition.

It appears that no specific training has been given on use of FSF, HRF or kitchen gardens in the last twelve months (across arms). There is also scope for improvement or more frequent trainings on roles and responsibilities as three CMs in each arm expressed that they needed further training in their task of book-keeping of savings and lending activities of SHGs.

Table 6.6: CM's training

	Treatment arm		Control arm		All	
	Count	**N**	**Count**	**N**	**Count**	**N**
Received training	12	14	11	12	23	26
Training received has been sufficient	10	12	9	11	19	23
Tasks which require more training						
Facilitating SHG meetings	0	3	0	3	0	6
Book-keeping of saving and lending activities	3	3	3	3	6	6
Providing information on health and nutrition in SHGs	0	3	1	3	1	6
Support SHG members in demanding HRF	1	3	0	3	1	6
Raise awareness among HHs to attend BD, AD	0	3	0	3	0	6
Help AWW organise BD, AD	0	3	0	3	0	6
Coordination with VRP, LHS for kitchen garden cultivation	0	3	0	3	0	6
Maintaining household demographic profile	0	3	0	3	0	6
Other	0	3	0	3	0	6
Don't know	0	3	0	3	0	6
Additional inputs required to facilitate work						
Additional training	4	14	6	12	10	26
Helper	0	14	0	12	0	26
More equipment (register, pens)	1	14	0	12	1	26
More visual aids for health and nutrition messaging	0	14	0	12	0	26
More contact with supervisor	0	14	0	12	0	26
Other	3	14	1	12	4	26
No assistance is required	8	14	5	12	13	26

Source: Authors' calculations.

All CMs demonstrate knowledge of their roles and responsibilities (Table 6.7). All the CMs of the treatment arm are aware that their responsibilities include facilitating SHG meetings, attending VO meetings, book-keeping and providing information on health and nutrition. All except one CM of the treatment arm were aware of their role in use of FSF and HRF. A few CMs (n=5) in the treatment arm did not mention other tasks such as assisting the AWW in organizing community events and preparing a household demographic profile.

All the CMs in the control arm were aware of their responsibility of facilitating SHG meetings and book-keeping and all but one said one of their roles was to attend VO meetings and facilitate use of HRF (Table 6.8). Only two of the CMs in the control arm knew of their role in raising awareness about community events. Overall, the knowledge of responsibilities of the CMs is high, and comparable across treatment and control arms.

Table 6.7: BCC training given to the CMs

	Treatment arm (N=14)	Control arm (N=12)	All (N=26)
	Count	**Count**	**Count**
CM has not received health and nutrition BCC training	0	11	11
CM has received BCC training in the following:			
Antenatal care	9	0	9
Complication readiness during pregnancy	8	0	8
Birth preparedness	8	0	8
Care of newborn	8	0	8
Importance of food and diet diversity	7	0	7
Different ways of achieving food security	1	0	1
Breastfeeding practices	5	0	5
Use of FSF to achieve food security	2	0	2
Use of HRF for healthcare	1	0	1
Kitchen garden cultivation	1	0	1
Women's nutrition	3	0	3
Pregnant mother's food and care	12	0	12
Other	6	0	7

Source: Authors' calculations.

Table 6.8: CM's awareness of roles and responsibilities

	Treatment arm (N=14)	Control arm (N=12)	All (N=26)
	Count	**Count**	**Count**
Facilitating the SHG meetings	14	12	26
Attending VO meetings	14	11	25
Book-keeping of saving and lending activities	14	12	26
Providing information about health and nutrition to the women in the SHGs	14	8	22
Microplanning for FSF – making a list of the demand of SHG members	13	9	22
Support SHG members in demanding HRF from VO	13	11	24
Raise awareness among households to attend Bachpan Diwas, Annaprashan Diwas	12	8	20
Help AWW to organise Bachpan Diwas, Annaprashan Diwas	9	2	11
Coordination with VRP, LHS for SHG members' kitchen garden cultivation	11	8	19
Maintaining a household demographic profile	9	8	17
Home visits to women in the 1000-day window	11	5	16
Conducting the survey for toilet construction	14	8	22

Source: Authors' calculations.

Village Resource Person (VRP)

The awareness of responsibilities was quite similar among the VRPs in both the study areas (Table 6.9). Five or more VRPs in each arm reported that they informed SHG members about the benefits, implementation and micro-planning of kitchen gardens, and agricultural techniques and livelihoods. In

addition, most VRPs across arms reported visiting households to check progress, discussing cultivation under monetary and space constraints, and attending VO meetings to discuss kitchen garden implementation. Most VRPs were aware of the CM in their area and their role and reported that they meet with them either once a week or twice a month.

Table 6.9: VRPs awareness of roles and responsibilities

	Treatment arm (N=7)	Control arm (N=7)	All (N=14)
VRP tasks (prompted and unprompted combined)	**Number**	**Number**	**Number**
Inform SHG members about the crops they can sow in their kitchen garden	4	5	9
Inform SHG members about the benefits of kitchen gardens	5	6	11
Give details of how to implement these gardens	5	6	11
Micro-plan information of SHG members interested in kitchen gardens	5	5	10
Visit SHG members' houses and help in the process	5	6	11
Discuss how to do kitchen garden cultivation despite space and monetary constraints	5	6	11
Attend VO meetings to discuss the status of kitchen garden cultivation and issues in implementation	5	6	11
Discuss agriculture and agricultural techniques	6	5	11
Discuss other livelihood activities	4	4	8

Source: Authors' calculations.

Almost all VRPs attended SHG and VO meetings regularly (Table 6.10). About half of the treatment arm VRPs (n=4) and all but one of the control arm VRPs (n=6) attend VO meetings twice a month, the rest attend them once a month.

Table 6.10: Participation of the VRPs in the VO meetings

	Treatment arm (N=7)	Control arm (N=7)	All (N=14)
VRP attendance at SHG and VO meetings	**Number**	**Number**	**Number**
Attends SHG meetings once a week	6	7	13
Number of respondents attending VO meetings	6	7	13
Frequency of attending VO meetings (N=6,7,13)			
Once a month	2	1	3
Twice a month	4	6	10

Source: Authors' calculations.

VRP's responses of their interactions with the CM was similar across arms (Table 6.11). Six or more VRPs in each arm (out of 7), reported that they knew the CM. VRPs in both arms reported that they either met the CM once a week or twice a month. Most VRPs reported that they discussed giving SHG members' advice about kitchen gardens and micro-planning of input needs.

Table 6.11: Interactions of the VRP with the CMs in their areas

	Treatment	Control	All
	Count	Count	Count
They know the CM (N=7,7,14)	6	7	13
Frequency of meeting with the CM (N=6,7,13)			
Once a week	2	2	4
Once a month	0	1	1
Twice a month	2	2	4
No regular schedule	1	0	1
Topics discussed with the CM (N=6,7,13)			
Micro-planning of input needs	1	0	1
Monitoring of kitchen garden progress	1	2	3
Procurement and/or distribution of inputs	1	0	1
Giving SHG members advice about kitchen gardens	4	4	8

Source: Authors' calculations.

A majority of the VRPs have received training on their roles and responsibilities. In the treatment arm, half of the VRPs (n=4) reported that they needed more training. The general perception among those who wanted more training was that training on new practices and crops benefitted the VRP and the SHG women. One respondent said -

"*Yes, more training is needed - the more information we get, the better*."

In the control arm, 3 out 6 VRPs responded that they did not need more training. For instance, one VRP remarked –

"*I don't need more training, whatever I have received is enough to complete my duties. I am doing the work that I have been told to do*."

Community Coordinators (CCs)

A CC's primary task is to ensure SHG meetings take place regularly, and to monitor the CMs and book-keepers and inspect records maintained by them. In addition, CCs raise awareness of JEEViKA-specific funding among the community.

As part of the MC pilot, CCs review the work of the CMs in SHGs and help them improve their performance in BCC dissemination. The CCs also visit SHGs and interact with members to verify what topics have been covered by the CM and if there has been a change in practices by the women. One of the CCs mentioned that since there are many VOs under his jurisdiction, he tries to focus on those which have members who are pregnant or lactating women. The CCs also try to make sure that CMs have attended training of all modules and in case they miss them, then they help organize a follow-up training for them or orient them to the modules during review meetings. Furthermore, the CCs conduct review meetings with the CMs, book-keepers and VRPs who report to them. *Only* one of the respondents mentioned participating in the convergence meeting.

All Community Coordinator's (CC) (n=4) received a formal training on the JEEViKA structure, on how to work with SHGs and VOs and manage their duties; Three CCs confirmed having received some training on the health and nutrition and on their role in the pilot.

Area Coordinator (AC)

Area Coordinators (ACs) play the role of supervisors, monitor implementation of various activities and identify bottlenecks. The ACs mentioned visiting a few SHG and VO meetings each month to understand implementation. For the MC pilot, ACs monitor the roll out of BCC modules and assess

how many SHG women have been reached. They supervise the CM, VRP, CC, bookkeeper, master book-keeper and HSC and help them perform their tasks better. They review activities at the Panchayat and cluster level and conduct surprise visits.

One AC also mentioned that it was his duty to coordinate between the Anganwadi Centre (AWC) and Primary Health Care Centre and to inform SHG members of it benefits. Two ACs mentioned participating in convergence committees and interacting with government frontline workers. The ACs were trained by the health and nutrition thematic manager. However, the ACs did not receive the same training as the CMs, which hinders their monitoring of the CMs.

Livelihoods Specialist (LHS)
Within the MC pilot, the LHS encourage organic farming and production for self-consumption. One of LHS mentioned organizing season-specific training for the VRPs on kitchen gardens. One of the LHS mentioned providing technical support for all the livelihood activities (both farm and off farm) under the MC Pilot.

All the LHS are oriented about their activities within JEEViKA, and two out of the three respondents mentioned also having received training on small kitchen gardens, health and nutrition and livelihood linkages. One of them felt that they needed more training on health and nutrition.

Block Project Manager (BPM)
The Block Project Managers (BPM) are responsible for monitoring tasks at the block level and they report to the District Project Manager. Since BPMs are the block-level gatekeepers for all the programs implemented through the JEEViKA platform, they review and monitor several programs or institutions, including ODF targets, school functioning, sale of farmer produce, provision of ration to SHG women, etc. They develop action plans, monitor block level targets, assign tasks to different cadres, and review their progress. In the monthly block-level JEEViKA review meetings, they discuss work plans, and review the ledgers maintained by the ACs, CCs, CMs and LHS. In addition, they organize trainings for the CMs and VRPs and address concerns raised at the panchayat level convergence committees.

The BPMs were first oriented about the MC pilot and their role in it in May 2016, but only received formal training on health and nutrition in February 2017. The delay in the formal training on health and nutrition for almost 9 months after the rollout of the intervention could have implications on their ability to adequately understand or monitor the progress of the BCC component of the pilot. In addition, their limited orientation to health and nutrition might have impacted their feelings of ownership of the work under the pilot as well.

Master trainers and Block Health, Sanitation and Nutrition Integrators (BHSNIs)
The MTs and BHSNIs are trained first by PCI, and then by the WB consultants. The training by the WB is tailored to the intervention in the MC pilot, with alterations both to the content and the timeline. Two responses help understand this interlinkage –

"Both the PCI and World Bank trainings are similar in content; the only difference is that the World Bank develops a page of main points that we need to talk about."

"In case there are any additions, the World Bank consultants carry out the training for that."

The MTs demonstrate awareness of their role in training the CMs and monitoring their health and nutrition dissemination activities in SHG meetings. One of the MTs mentioned conducting peer group meetings in the Bachpan Diwas where they provided information to pregnant women and mothers of

children up to the age of six months. They also participate in panchayat-level review meeting where the CMs' problems are addressed.

BHSNIs work with the MTs on training the CMs and conduct follow-up trainings for those CMs who miss initial sessions. In addition, they participate in the community events and the block level convergence committees, and review the work of the CMs and HSC members.

Overall, it would appear that the JEEViKA staff and key cadres at the block level and below are largely aware of the key elements of the pilot, such as the focus on women and children in the 1000 days window and behavior change communication through CMs, and have been oriented to their roles and responsibilities. This high level of awareness of the pilot and its activities could, however, be the outcome of the overview of the pilot which was given to staff members a few months before the process evaluation [Refer to the process tracing map, Figure A-1 in the Appendix]. The external staff hired by PCI – the BHSNI and MT – also have a clear delineation of their responsibilities in the MC pilot.

However, we observed that as one moves further up the hierarchy of JEEViKA staff, there is an increase in ambiguity around both their own roles and responsibilities, as well as around the roles and responsibilities of other key actors. Since there are multiple components of the JEEViKA program, there are multiple activities focusing on different sectors, which increases the burden and workload of ground and mid-level staff who are appointed according to regions and not themes. More senior staff may not be able to understand the multiple requests on the time of the staff below them. This lack of appreciation for workload and competing requests could lead to an under appreciation of the time required to achieve certain outcomes.

Some responses from a senior JEEViKA staff member might help put this in perspective. When asked what his/her role was, the response received was

I am responsible for everything working well – the BCC, the convergence, linkages with livelihoods etc. It is my responsibility to make sure this program runs effectively at the SHG level and its results are good, so that we can prove that this model works.

This is considerably vaguer than the responses received from the trainers and block-level staff. When asked how the staff prioritize their work in the face of multiple thematic areas being implemented at once, this staff member responded

Each person has an explicitly defined responsibility. So, there is no possibility of duplication, or overloading of tasks. We have confidence that the prioritization is happening smoothly.

This statement, which reflects a disconnect with the ground realities we observed, was then followed by

The CM is not being engaged in any other work, she just has to submit a report of her work. [...] If the CM assists with the [Digital Green] videos, she will get an additional incentive. [...] The CM only has to facilitate the meetings, help with savings and loans, disseminate the BCC, assist the VRP with the videos, prepare the reports.

It is clear from the statement above that while the staff member was able to articulate several different and competing tasks assigned to the CM, he/she was unable to grasp the magnitude of the workload and the strain that it was putting on the system. The reader should note that the list of tasks mentioned by the staff member is still not complete, as the CM conducts several other tasks as well, including maintaining the toilet survey forms, signing members up for life insurance, and constructing the household demographic profile, among others.

Summary

- SHGs and VOs have been formed and are functional. About 68 percent of our sample belonged to an SHG. Almost all SHGs had savings and credit activities and almost all members participated in those activities.
- PCs were in place and functional in both treatment and control arms. In the treatment arm, most of the procurement was of food grains, though seeds have been procured a few times. In the control arms the members were aware of their roles and committees seemed to be in place but there was little evidence of procurement of food items. Awareness of the rules of repayment of money was good in both arms.
- Slightly less than half the respondents had heard of the Annaprashan Diwas, and 32.2 percent had heard of the Bachpan Diwas. However, a large proportion did not know how many times the event had been held in the last three months, and did not know who participated in these events. Participation in these events was very low.
- Awareness of community events among the CMs was quite high. 9 out of 14 CMs in the treatment arms had heard of Annaprashan Diwas, compared to only 3 out of 12 in the control arms. In the control arm knowledge among the CM of frequency of these events and services provided was also quite poor as compared to treatment arm.
- Comparing the household and CM awareness of these community events, we can infer that some services are indeed being provided, but that the events may not be being held at the intended frequency, and that there is variability in CM and household reports of services available.

Staff knowledge of roles and responsibilities

- The CMs in both the treatment and control arms have completed 11 years of education, on average, and have been in office for an average of 30.8 months.
- Treatment arm CMs reported spending a greater number of hours per day working. The most time-consuming task, across arms, is facilitating SHG meetings. Scheduling a meeting and ensuring attendance of members might be diverting more of the CM's energy than it should.
- Training on roles and responsibilities of the CM was conducted in both arms and was perceived by the CM as sufficient. The need for more training on book-keeping and other lending related aspects was expressed.
- Training on health and nutrition behavior change communication messages has happened only in the treatment arm. The topics covered in the training, as indicated by the CM, include maternal and child nutrition, ANC, complications in pregnancy, and newborn care. However, no specific training on use of FSF, HRF or kitchen gardens was received in the last twelve months.
- Knowledge of their roles and responsibilities among the CMs is good in both arms. Most CMs noted that facilitating SHG meetings, attending VO meetings, book-keeping, facilitating use of the HRF, and providing information on health and nutrition (treatment arm only) were their responsibilities. However, their understanding of their role in coordinating with AWW and community events was relatively weaker.
- Most VRPs were aware of their responsibilities, and reported visiting households to check progress on kitchen gardens, discussing cultivation under monetary and space constraints, and attending VO meetings to discuss kitchen garden implementation. In addition to this, majority of the VRPs were also involved in discussing agricultural techniques and livelihoods. About half of the VRPs indicated the need for more training. These findings were similar across arms.

- Most VRPs were aware of the CM in their area and met with them multiple times a month. The topic of discussion typically is giving SHG members advice on kitchen gardens and micro-planning of input seeds.
- CCs and ACs are aware of their roles in the MC pilot. Some gaps in training were identified. For example, among the CCs it was discovered that the training happened much after the pilot began and the ACs expressed the need to be trained on the same modules on which the CM received training, in order to monitor them better.
- There is also role clarity among the BPMs but their training on health and nutrition was significantly delayed, which may have affected their ability to monitor progress and their ownership of the pilot.
- All LHS were oriented about their activities within JEEViKA. Two out of the three respondents mentioned having received training on small kitchen gardens, health and nutrition or how to link livelihoods with the same. One of them felt that they needed more training on health and nutrition.
- The Master Trainers are aware of their duties of training the CMs and monitoring their performance in SHG meetings. They give feedback to the CMs to help them improve their dissemination. They also participate in or conduct a Panchayat level review meeting where the CMs' problems are addressed.
- The BHSNIs work with the Master Trainers on training CMs. The BHSNI also play a role in community events such as Annaprashan and Bachpan Diwas where they have to monitor the participation of pregnant and lactating women. The BHSNIs also mentioned their participation in the block level convergence committees.

7. Implementation processes - Behavior change communication

7.1 CM's knowledge of health and nutrition information

On the whole, CM knowledge was not high, and there were few differences in CM knowledge of health and nutrition across arms. Since the MC pilot implementation rests on the CM and her ability to disseminate information, this is a matter of concern. We present the results on CM knowledge across various different topics in this chapter.

General nutrition knowledge

Only half of the CMs in the treatment arm (n=7) and less than half in the control arm (n<6) were knowledgeable of the foods that provide energy (Table 7.1). Only a few CMs in both groups identified animal-source foods to be important for the body. Similarly, only some CMs identified iron and vitamin A rich foods. All CMs were aware of the importance of cleanliness in remaining healthy.

Table 7.1: CM knowledge of types of food

	Treatment arm (N=14)	**Control Arm (N=12)**	**All (N=26)**
	Count	**Count**	**Count**
Foods that provide energy to work			
All grains	7	5	12
Sugar, jaggery	0	0	0
Oil, ghee	3	0	3
Foods for growth (e.g., All pulses (green gram, lentil, pigeon pea, chickpea), egg, meat, fish, milk, curd, soybean	12	12	24
Other	2	3	5
Foods that help body grow			
All pulses (green gram, lentil, pigeon pea, chickpea)	10	5	15
Egg	1	2	3
Meat	2	1	3
Fish	2	1	3
Milk, curd	8	8	16
Other	9	8	17
Don't Know	1	1	2
Foods that protect from illness			
Green leafy vegetables	12	10	22
Other	6	8	14
Don't Know	1	0	1
Iron rich foods			
Green leafy vegetables	7	5	12
Liver, kidney and heart	1	0	1
Meat	5	2	7
Milk, curd	7	6	13
Yogurt	1	1	2
All types of lentils	1	4	5
Fruits	5	6	11
Other	5	1	6
Don't Know	2	3	5
Foods rich in vitamin A			
Orange colored fruits/vegetables	10	7	17
Green leafy vegetables	4	3	7
Eggs	1	1	2
Breast Milk	1	0	1
Cow's milk	2	7	9
Other	6	3	9

	Treatment arm (N=14)	Control Arm (N=12)	All (N=26)
	Count	Count	Count
Don't Know	2	1	3
Calcium rich food			
Mlk and milk products	7	7	14
Green leafy vegetables	1	5	6
Meat products	6	3	9
Other	5	6	11
Don't Know	2	2	4

Source: Authors' calculations.

Health and nutrition during pregnancy:

Hardly any CMs in the treatment arm (n=4) and only one CM of the treatment arm responded that pregnant women should eat more than normal (Table 7.2). Five respondents of the treatment arm and five from the control arm suggested consumption of more fruits and vegetables. Half the CMs of the treatment arm did recommend eating more milk, meat, fish and eggs but knowledge of the CMs in the treatment arm should ideally have been higher. The importance of a nutritious diet for a pregnant woman was not so well understood in either arm, with responses by 2-4 CMs in each arm citing well-being of mother and child. For post-pregnancy period, only five treatment arm CMs recommended eating more in each meal.

Table 7.2: CM knowledge of a pregnant woman's nutritional needs

	Treatment arm (N=14)	Control Arm (N=12)	All (N=26)
	Count	Count	Count
Food consumption of pregnant woman			
Eat less than normal	3	1	4
Eat as much as normal, no change	0	1	1
Eat more than normal	4	1	5
More fruits and vegetables	5	5	10
More milk, meat, eggs and fish	7	3	10
Eat foods with at least 3 colours – orange, green and white	5	2	7
Other	5	1	6
Don't Know	0	3	3
Eat small meals at frequent intervals	4	0	4
Why is nutrition for the pregnant woman important			
For adequate weight gain of pregnant woman	3	2	5
Quicker recovery after delivery	4	0	4
It is a good investment in future	1	0	1
Other	0	1	1
Don't Know	0	2	2
Well-being of the child	2	4	6
Well-being of the mother	4	2	6
Well-being of mother and child	2	3	5
Eating pattern of lactating woman compared to non-pregnant woman			
Eat more at each meal (eat more food each day)	5	4	9
Eat more frequently (eat more times each day)	1	2	3
Eat more protein-rich foods	2	2	4
Eat more iron-rich foods	1	0	1
other	5	3	8

	Treatment arm (N=14)	Control Arm (N=12)	All (N=26)
	Count	Count	Count
Don't know	1	2	3
Eat as much as pregnant woman	2	0	2

Source: Authors' calculations.

Delivery preparation

Knowledge on delivery preparation was higher in the treatment arm as opposed to the control arm (Table 7.3). In the treatment arm some CMs (n=10) mentioned keeping the number of the ambulance and saving money for medicines and delivery as part of preparation for delivery of newborn. Nine CMs discussed keeping the ASHA and ANM's numbers handy and eight mentioned keeping a clean cloth, blade and other necessary items in case of delivery at home. Most CMs (n=8) in the control arm spoke of keeping enough money for delivery and eight mentioned keeping necessary tools to deliver at home.

Table 7.3: CM knowledge of birth preparedness

	Treatment arm (N=14)	Control Arm (N=12)	All (N=26)
	Count	Count	Count
Preparation for delivery			
Keep the ASHA and ANM didi's number handy	9	1	10
Identify a hospital for delivery	5	0	5
Have enough money saved to pay for medicines/delivery charges if any	10	8	18
Have someone to accompany them	3	0	3
Keep the number of the ambulance readily accessible	10	5	15
Keep clean cloth, clean blade etc readily accessible	8	8	16
Other	0	1	1
Don't Know	0	1	1
Prepare for blood supply	3	0	3
Danger signs or symptoms during pregnancy or delivery that require immediate medical care			
Vaginal bleeding	11	3	14
Reduced or loss of fetal movement	4	0	4
Headache with dizziness and blurred vision	7	2	9
Swelling of hands and face	3	1	4
Shortness of breath and palpitations, convulsions/fits	2	1	3
Severe anemia	2	0	2
Night blindness	2	1	3
Fever	2	0	2
Burning sensation/ pain during urination	1	1	2
Excessive white discharge from vagina	4	1	5
Other	2	4	6
Don't know	0	2	2
Pain in the stomach	1	2	3

Source: Authors' calculations.

Infant and young child feeding practices

All the CMs of the treatment arm and nine CMs in the control arm were aware of the benefits of exclusive breastfeeding (Table 7.4). But there was considerable disparity across arms in knowledge of the timely initiation of breastfeeding and duration of exclusive breastfeeding.

CMs were considered aware of the timing of the introduction of complementary foods if they correctly responded to the questions on when the food items could be introduced. CMs in the treatment arm correctly identified the age of introduction to be between 6 to 8 months for feeding rice and legumes only. CMs in both the study arms incorrectly reported that milk from other sources can be introduced to children before 6 months.

Table 7.4: CM's knowledge of Health and Nutrition

	Treatment arm (N=14)	Control arm (N=12)	All (N=26)
Number of CMs who are aware of	**Count**	**Count**	**Count**
Initiation of breastfeeding	13	5	18
Duration of exclusive breastfeeding	12	2	14
Benefits of exclusive breastfeeding	14	9	23
Age-appropriate introduction of complementary food (N=13,11,24)§	5	0	5

Source: Author's Calculations

§The respondent was considered aware if she answered of 6-8 months when asked the age at which a child should first be fed the following items - water, rice, bread, legume, green leafy vegetables, other vegetables (orange, pumpkin, carrot, sweet potato), fruits, meat, egg, milk (from other sources) and nuts; and if the CM responded any time after 5 months when asked about introduction of purchased snacks in the child's diet.

Knowledge of CMs of the control arm on complementary feeding is very poor. None of them could accurately respond to the full set of questions on introduction of complementary food and so none of them can be considered aware. Definitions of the indicators used here are provided in Table A.3 in the Annexures. Less than half the CMs in the treatment arm knew the correct timing for introducing all complementary foods.

The reported number of months at which certain food can be introduced is presented in Table 7.5. CMs in the treatment arm report that eggs and flesh foods can only be introduced when the child is a year or older. While this is lower than the average number of months in the control arm, it is still far from the correct response.

Table 7.5: Knowledge of age of introduction of complementary foods

	Treatment arm		Control arm		All	
	Mean (SD)	**N**	**Mean (SD)**	**N**	**Mean (SD)**	**N**
Water	10.14 (14.37)	14	5 (1.26)	11	7.88 (10.93)	25
Rice, Bread, Pressed rice, chiwda etc.	6.64 (0.63)	14	7.36 (1.8)	11	6.96 (1.31)	25
Legume: daal	6.36 (0.63)	14	7.25 (1.71)	12	6.77 (1.31)	26
Green leafy vegetables	8.14 (4.67)	14	10.55 (2.16)	11	9.2 (3.91)	25
Vegetables such as pumpkin, orange yam, carrots, tomato, sweet potato	9.5 (7.83)	14	16.64 (6.2)	11	12.64 (7.89)	25
Fruits such as banana, papaya, mango	9.93 (7.81)	14	21.08 (13.28)	12	15.08 (11.9)	26
Meats such as chicken, mutton, fish, etc.	13 (11.4)	14	28.5 (18.29)	12	20.15 (16.55)	26
Eggs	11.5 (10.92)	14	28.83 (25.81)	12	19.5 (20.8)	26
Milk (cow, goat or powdered)	5.93 (1.82)	14	4.75 (2.9)	12	5.38 (2.4)	26
Peanuts, ground nuts and other nuts	12.14 (14.21)	14	19.27 (17.26)	11	15.28 (15.7)	25
Purchased snack foods (chips, chocolates)	11.92 (8.07)	13	30.92 (25.38)	12	21.04 (20.53)	25

Source: Authors' calculations.

All other tables related to CM knowledge – such as knowledge of WASH practices, antenatal care, iron deficiency and anemia, care during pregnancy and other topics – have been relegated to the Annexures. Please refer to Tables A.4 – A.9 for more information.

To summarize, CM's knowledge of foods which provide energy, help the body grow, protect from illness and rich in calcium is good in the treatment arm. All CMs interviewed are aware of use of soap to wash hands. Awareness of how to prepare for delivery was good in the treatment arm with majority mentioning saving enough money to pay for medicines and keeping the ambulance number with them. The response to all questions associated with possible complications that women face during pregnancy was to take her to the hospital. The CMs in the treatment arm were aware of the age until which a child should be exclusively breastfed and breast fed in general. Majority of them also knew that exclusive breastfeeding protects baby from illness. Most CMs of the treatment arm knew that the immunization card is free of cost.

Knowledge about care of pregnant women is limited among the CMs. Awareness of recommended number of ANC check-ups is still low and knowledge of services provided under ANC is poor in both the arms. Less than half the CMs identified tetanus injections as necessary vaccination for pregnant women. When asked about how much should a lactating woman eat in comparison to ta non-pregnant women, less than half the respondents (in both the arms) said the lactating woman should eat more in each meal or more frequently. The consumption of IFA tablets is the only component of ANC where the CMs performed well in their response to the number of IFA tablets to be consumed but awareness of side effects associated with IFA was low. Except for polio, the awareness of diseases that a child can be protected from immunization was very low.

Box 7.1: Comparing CMs' health and nutrition knowledge across baseline and PE

Several of the questions testing the CMs' knowledge on health and nutrition were the same in both the baseline survey conducted in 2016 and the PE. We compared the knowledge of the 23 CMs from the PE who were also interviewed at baseline and found that some knowledge components have improved, while others have shown a decline. We summarize the key results here and refer the reader to Table A.4 in Appendix for the full details on the comparison.

Improvement in knowledge -

- Knowledge of consumption of IFA tablets has improved across arms.
- More CMs are now aware about identifying a hospital for delivery (in the treatment arm) and saving money to pay for emergency expenses (in both arms).
- There was increased awareness in when the immunization card should be updated (across arms).

Deterioration in knowledge –

- Sanitation and hygiene – knowledge of disposal of young child's stools has worsened in the treatment arm. Fewer CMs in both arms mentioned 'before eating' and 'after using toilet' as instances when mother or caregiver should wash hands.
- Infant feeding - Number of CMs who said colostrum should be given to the baby soon after birth decreased in both the arms.
- Knowledge of tetanus injections as vaccination for pregnant women reduced across arms.
- Fewer CMs in both arms responded that pregnant women should eat more than normal or that she should eat more fruits and vegetables.

In the process evaluation, the CMs were only asked questions on health and nutrition which were related to the BCC modules that had already been covered. In that light, the knowledge results were not satisfying.

Knowledge of the Health Risk Fund (HRF)

Except for one CM in the control arm, all other CMs who were interviewed, were aware of when the HRF can be requested by an SHG member (Table 7.6). A majority of the CMs in both the arms considered non-repayment of a previous loan and not saving (monthly) for HRF to be the reasons for ineligibility to access the HRF loan. The HRF loan is not considered dependent on the approval of one agent. Across arms, the responses were mixed between SHG members, VO executive members, the CM and Book-keeper. While majority of the CMs on the control arm (n=7) believe that the VO executive committee decides the amount of loan, in the treatment arm, CMs think it could be the CM, VO executive committee or the SHG members (Table 7.4). A similar discrepancy was observed between CMs of the treatment and control arm in who they thought were responsible for determining the repayment time-period. Some of the CMs in the treatment arm (n=6) felt that the CMs decided the time for repaying the HRF loan while the control arm CMs (n=6) felt that the VO executive committee made that decision.

Table 7.6: CM's knowledge of use of HRF

	Treatment arm (N=14)	Control arm (N=12)	All (N=26)
CM's knowledge of HRF	**Count**	**Count**	**Count**
CM knows when to request HRF§	14	11	25
Typical reasons for non-eligibility of HRF			
She has not saved for HRF	6	4	10
Not enough money to go around	1	0	1
The previous loan has not been repaid	8	7	15
She doesn't attend SHG meetings regularly	2	1	3
Other	3	2	5
Don't Know	1	2	3
Who approves HRF?			
SHG members	5	5	10
VO members	2	2	4
VO executive Committee	4	4	8
CM	1	4	5
Other	3	3	6
Book-keeper	3	2	5
Who decides how much can be borrowed?			
SHG members	4	3	7
VO members	3	1	4
VO executive Committee	4	7	11
CM	5	4	9
Other	2	3	5
Book-keeper	3	2	5
Who decides the time period of repayment of HRF?			
SHG members	3	1	4
VO members	2	1	3
VO executive Committee	2	6	8
CM	6	5	11
Other	3	2	5
Book-keeper	1	2	3

Source: Authors' calculations.
§ Refer to Table A.3 in Appendix

Knowledge of the Food Security Fund (FSF)

All CMs in the treatment arm and a majority (ten) in the control arm were aware of when the FSF can be utilized (Table 7.7). CMs in both the areas do not recognize a single entity to be the approval body for the FSF. Six CMs in both the treatment and control arm thought that the VO executive members approve FSF and some CMs (n=5) thought that the SHG members approved it. Similarly, some CMs (n=5 in both the arms) thought that the VO executive members determined the time period of repayment, while some other CMs thought that it was the CMs' role to do so.

Table 7.7: CM's knowledge of use of FSF

	Treatment areas (N=14)	Control arm (N=12)	All (N=26)
	Mean (SD)/ Count	Mean (SD)/ Count	Mean (SD)/ Count
CM knows when to request FSF[§]	14	10	24
Who approves FSF			
SHG members	5	5	10
VO members	4	2	6
VO executive Committee	6	6	12
PC	0	3	3
CM	4	5	9
Book-keeper	2	2	4
Other	1	2	3
Who decides the time period of repayment of FSF?			
SHG members	3	1	4
VO members	2	1	3
VO executive Committee	5	3	8
CM	5	8	13
Other (Bookkeeper, treasurer)	3	6	9
How does the CM help SHG members in getting FSF?			
Advise the SHG member on what to buy	1	1	2
Conduct microplanning of demands of all SHG members	10	8	18
Represent the demand to the VO	5	6	11
Assist the PC in distributing foodgrains	1	1	2
Send SHG members to get food samples from the shops	1	0	1
Other	2	1	3
Don't Know	1	1	2
Number of SHG members required to access FSF (N=14,11,25)	26.14 (25.16)	16.36 (16.92)	21.84 (22.06)
Number of times FSF was used in last year (N=10,10,20)	1.4 (1.17)	1.4 (0.7)	1.4 (0.94)

Source: Authors' calculations.
§ Refer to Table A.3 in Appendix

Knowledge of kitchen gardens

Only 9 CMs in the treatment arm and 7 CMs in the control arm are aware of kitchen gardens and its use in supplementing the diet of poor households (Table 7.8). Ten CMs in both the study areas identified the Village Resource Person (VRP) to be the cadre advising on the kitchen gardens. Most of the CMs (n=12) in the treatment arm also identified CMs to be the source of information on kitchen gardens. The CMs in both the arms mentioned that the VRP and the CM help the SHG members setting up kitchen gardens.

Table 7.8: CM's knowledge of utilization of kitchen gardens

	Treatment arm (N=14)	Control arm (N=12)	All (N=26)
	Count	**Count**	**Count**
CM is aware of Kitchen Gardens§	9	7	16
Who gives advice on kitchen garden cultivation?			
Village Resource Person	10	10	20
VO member	1	0	1
Members of SHG	2	0	2
Family members	1	0	1
CM	12	7	19
Other	1	2	3
Who has helped with setting up kitchen gardens?			
Village Resource Person	9	4	13
VO member	2	1	3
Members of SHG	2	0	2
PRADAN resource person	1	0	1
Community/Area Coordinator	0	1	1
CM	8	4	12
Other	1	1	2
No one	1	0	1

Source: Authors' calculations.
§ Refer to Table A.3 in Appendix

7.2 Dissemination of health and nutrition information to SHGs

In 18 of the 28 SHG meetings, health and nutrition topics were discussed. The topics of discussion were dietary diversity, pregnancy and new-born care, breastfeeding, and complementary feeding, and these correspond to the topics on which the CMs received training most recently.

On average, a CM reported disseminating health and nutrition information to 9 SHGs in the treatment arm after the last round of training. A majority of the CMs (n=10) received training on new-born care and some CMs received training on breastfeeding (n=7) and a few received training on the importance of food (n=2) and dietary diversity (n=2) during their last training session. Nearly all the CMs (n=13) in the intervention areas reported disseminating the information to SHGs within one week of receiving the training. Only a few CMs reported using picture cards (n=4), games (n=2) and flipcharts (n=2) while disseminating the information. Several CMs (n=8) report that the topic of food and dietary diversity generated the most interest among the SHG members, followed by birth preparedness and new-born care (n=3), and antenatal care, pregnancy and breastfeeding (n=2). Overall, few CMs in the intervention areas expressed difficulty in discussing any topics.

In general, CMs typically start discussions on health and nutrition by recapping the prior week's information and quizzing and engaging the women. The topics of discussion in the SHG meetings correspond to those on which the CMs received training.

Only in 5 SHG meetings did CMs use any visual aids during discussions of health and nutrition topics. In general, there were no links made between the information disseminated and the resources available to be able to implement the suggestions (e.g., discussing the use of kitchen gardens or food security fund for improving dietary diversity). *Annaprashan Diwas* was mentioned in only two meetings during the complementary feeding discussion and kitchen gardens were mentioned only once.

In some SHG meetings, as other topics take precedence, health and nutrition topics are discussed only for a very limited time or not at all mentioned. For example, in 4 SHGs, there were lengthy discussions on insurance policy and its benefits, with CMs urging the SHG members to apply for the insurance policy. In 8 SHGs, CMs emphasized the need to construct toilets and women discussed financial difficulties to be able to construct them. In 7 SHGs time was spent in discussing issues related to savings including the need to save regularly, the benefits of savings, and loan repayment. Thus, nutrition topic discussions compete for time with other topics.

As CMs are the frontline workers for the JEEViKA program and are in direct contact with the SHG members, any new projects or programs introduced onto the JEEViKA platform are implemented through the CMs. This has implications on CMs' overall time and the time spent on delivering health and nutrition messages in the JEEViKA-MC pilot areas. This was evident in the meetings where insurance policy or toilet construction discussions took precedence over the nutrition topics. In addition, in SHGs where the basic savings platform is not completely functional, it is difficult for the members to focus on other topics. Some SHG members complained- *"Here the money is given to only those who are known to each other, and in the end we have to get money from somewhere else to get our work done. What benefit did we have by joining the SHG when our work didn't get done? The ones who are running the SHG they have the most benefit, they have become fat by eating it (the money). Poor people and poor didi [women] did not get any benefit."*

In some cases, SHG members did not feel empowered to have an opinion of the proceedings of the meeting. Some SHG members remarked in one of the meetings that was held at a CM's house where the CM's husband helped organizing it: *"do as you [CM] usually do, do it like you do, we can't say anything, it is your wish."* Other barriers to dissemination of nutrition information include CMs' inability to communicate the messages well and impeded meetings routine, especially during harvest season.

7.3 Facilitation of JEEViKA funds

There are several funds available to SHG members at the SHG or VO level. We discuss two of these here – the HRF and the FSF – both of which are VO-level funds. The HRF is of amount INR 50,000, and is lent at a rate of interest of 1 percent to any SHG member who needs money for a health emergency. SHG members also contribute to this fund directly, with each member depositing INR 10 per month towards this pool.

The FSF is a fund of INR 1,00,000 that is available free of interest for the purpose of purchasing food for SHG members in bulk. The CMs map the food requirements of the member SHGs every 4-5 months and the PC of the VO then purchases grains for the SHGs at a rate acceptable to the poorest of the poor. While this fund is available in all JEEViKA areas, there are two differences under the MC pilot– one, there is an extra focus on pregnant and lactating women, and they get preference in purchases, and two, there is an extra emphasis on improving the diversity of the foods purchased using the FSF. This is meant to be linked to the promotion of the BCC on the quantity of food in the 1000-day window. Only once 40 percent of the loan has been repaid can another demand for food through the FSF be made.

Food Security Fund (FSF)

There do not seem to be large differences across arms in the awareness of the FSF among the key cadres and committees involved in its use. Most of the PC members across arms reported being involved in or responsible for the purchase of food items, but only a few were aware of the FSF itself. In both arms some PC members said they prioritized the poorest of the poor in making their decision about the types of food items to purchase.

Most CMs across both arms (n=18) said that they have to develop a micro-plan of commodities to be purchased through the FSF based on the demands of the SHG members (Table 7.9). In addition, some CMs (n=11) perceive that they have to present the demand for the food purchase to the VO. These proportions were fairly similar across treatment and control arms, as would be expected given that the Food Security Fund is one of the core JEEViKA interventions.

About half of the CMs in the treatment arm (n=8) and a majority of CMs in the control arm (n=9) mentioned giving priority to the poorest of the poor SHG members while purchasing food using the FSF. Only four CMs from the treatment arm also mentioned the prioritization of women in the 1,000-day window in using FSF, which is a specific focus under the MC pilot. This prioritization was not mentioned by the PC members.

Table 7.9: CMs role in facilitating use of the FSF

	Treatment arm	**Control arm**
	Mean (SD)/ Count	**Mean (SD)/ Count**
How does the CM help SHG members in getting FSF (N=14, 12)		
Advise the SHG member on what to buy	1	1
Conduct microplanning of demands of all SHG members	10	8
Represent the demand to the VO	5	6
Assist the PC in distributing foodgrains	1	1
Assist the VO committees in deciding what to buy	0	0
Send SHG members to get food samples from the shops	1	0
Other	2	1
Don't know	1	1
SHGs have demanded but not received FSF (N=14, 12)	4	0
Who is prioritized in giving grains? (N=14,12)		
Poorest of the poor members	8	9
Women in the 1000 days (pregnant, lactating, and women with children below two years of age)	4	0
No one	0	0
Other	1	2
Don't know/ Don’t remember	1	1
Number of times SHG purchased through FSF in the last one year (N=10,10)	1.4 (1.2)	1.4 (0.7)
Number of SHGs which have used FSF (N=10,10)	8.4 (1.8)	10.5 (2.0)

Source: Authors’ calculations.

Box 7.2: Health Risk Fund

Health Risk Fund (HRF) is available from the VO to SHG members to cover costs during illness. Some treatment arm CMs (n=5) and control arm CMs (n=3) report that they play a role in approving or facilitating the use of the HRF. Almost all CMs across both arms knew when to request the fund. Three treatment arm and 7 control arm VO executive members explicitly mentioned the HRF as a fund that is available from the VO in case of ill-health.

Prior to approving the HRF fund release, a claim is scrutinized. One VO executive member said *"The loan for when someone gets sick comes for 50,000 rupees. We see if anyone is sick and is in need for this money. Then we go to the doctor and show that sick person's report. First, all five people go together to show the report to determine if it's a genuine case. The money is only given to a genuine case."* Another remarked – *"The approval of all SHG members matter. For example, all 10 members will go and check if the case of a sick person is genuine before that person is given the loan."*

Most CMs in both treatment and control arms reported that SHGs saved monthly for the HRF (Table 7.10). The average amount SHG members borrowed from the fund was INR 13,909 in the treatment arm and INR 15,100 in the control arm. There did not seem to be any significant barriers to the use of HRF. Only in two cases were members unable to avail the HRF as the process of acquiring the loan was perceived to be time consuming.

The CMs in the treatment arm mainly facilitate the uptake of HRF by helping prepare the member's application (n=6). A majority of CMs (n=7) in the control arm mentioned preparing an application or request letter for the concerned SHG member. The CMs also described playing the role of coordinator by organizing an SHG meeting, getting members to take a decision on the request for HRF, and getting the member's case presented in the VO. One CM mentioned the need for her signature to get money from the bank. Only one CM was not aware of the HRF as she had recently joined.

Table 7.10: CMs report on the uptake of the HRF

	Treatment arm (N=14)	Control arm (N=12)	All (N=26)
	Mean (SD)/ Count	Mean (SD)/ Count	Mean (SD)/ Count
In the past 6 months, have members of your SHG saved for the HRF?			
Yes, every month	11	12	23
Yes, occasionally	2	0	2
No, never	1	0	1
Has anyone in your SHGs ever taken an HRF loan?	11	10	21
On average, how much does a member borrow (N=11, 10, 21)	13909.1 (13457)	15100 (15021.8)	14476.2 (13873.1)
Has anyone in your SHGs ever wanted to take an HRF loan but been unable to do so	1	1	2

Source: Authors' calculations.

The CMs reports of the SHG members saving regularly towards the HRF are somewhat borne out by the households' own perceptions. Of the 376 SHG members in our sample who had heard of the HRF, 64 percent reported that they saved for this fund every month. However, 22.3 percent said they never saved for the HRF. These proportions were not significantly different across arms.

7.4 Facilitating promotion and setting up off Kitchen Gardens

CMs and VRPs in both arms report that they promote kitchen gardens, and help SHG members in setting them up. CMs in the treatment arm were actively engaged in the process of cultivating and tending to kitchen gardens. Most said they provide advice on ways to grow vegetables in a limited amount of space, and visit the gardens of SHG members. Only two treatment arm CMs mentioned that they do not extend any help, and only one said that an SHG member had wanted to set up a kitchen garden but was unable to do so.

Fewer CMs in the control arm compared to those in the treatment arm confirmed that SHG members associated with them have set up kitchen gardens. The CMs in the control arm gave advice on preparing the soil, or on the types of vegetables which can be planted. Close to half the CMs in the control arm (n=5) said that SHG members wanted to set up kitchen gardens but were unable to due to lack of land, lack of time and knowledge.

A majority of the VRPs in the treatment and control arms (n=9) inform SHG members about the benefits, and help in the implementation and micro-planning of kitchen gardens; this includes providing technical advice on planting and weeding. The proportions were similar across arms. However, there was not a lot of clarity on what is done with the microplan once it has been developed. Most VRPs report visiting households to check on progress and discussing cultivation under monetary and space constraints. Nearly all VRPs across arms (n=11) report visiting the kitchen gardens more than once a month. Some VRPs (n=7) reported that funds are available to procure seeds and other inputs for the SHG women. However, they differed on the source of this funding (e.g the SHG corpus, VO funds or the CLF).

VRPs cited low remuneration, lack of time, and inadequate knowledge of practices due to poor training as barriers to implementing their duties. One VRP said, "*During the harvest period I have to visit the field, measure the production from each side and register it. It is a very difficult time for me and till now I have not received a single penny as compensation. I continue my work because god's blessings are with me*."

In addition to the VRPs, the LHS provides technical information to VOs on how to grow kitchen gardens, and promote sack farming for the landless. In one block, the LHS said that he has been told to focus on the treatment panchayats and has been visiting these panchayats at least 1-2 days a week. To raise awareness and increase motivation around kitchen gardens, *Kisaan Diwas* was held in December 2016, and women who were growing these gardens were felicitated. Only in one block does the cluster-level federation (CLF) buy seeds and redistribute them to VRPs and SHG members.

LHS reported that inputs and knowledge form the government agriculture extension workers – the Kisaan Salaahkar and Krishi Samanvayak - would be helpful for setting up and maintaining kitchen gardens. However, they work mainly with large farmers who own an acre or more, and with the men in the community, and have little to do with SHGs or kitchen gardens. However, the LHS tries to keep the Block Agricultural Officer (BAO) informed about agriculture-related activities, seeks support from the Kisaan Salaahkars and Samanvayaks and also connects the VRPs with the Salaahkars.

Summary

SHGs

- In about 65 percent of the SHG meetings observed as part of the process evaluation, health and nutrition topics were discussed. The topics of discussion were dietary diversity, pregnancy and new-born care, breastfeeding, and complementary feeding, and these correspond to the topics on which the CMs received training most recently.

- Nearly all the CMs in the treatment areas reported disseminating the information to SHGs within one week of receiving the training. Only a few CMs reported using picture cards, games and flipcharts while disseminating the information. Several CMs report that the topic of food and dietary diversity generated the most interest among the SHG members, followed by birth preparedness and new-born care, and antenatal care, pregnancy and breastfeeding. However, overall, there were no links made between the information disseminated and the resources available to be able to implement the suggestions.
- Impediments to dissemination of nutrition information include CMs' lack of knowledge, their inability to communicate the messages well, routine SHG meetings not taking place (especially during harvest season), nutrition information dissemination not being a priority during these meetings, or lack of interest among the women.

Health and Nutrition

- When responses of the CMs were compared on questions on health and nutrition with their responses in the Baseline, it was observed that the knowledge of IFA consumption has increased and a greater number of CMs are aware about how to be prepared for delivery. But knowledge of sanitation and hygiene has deteriorated in disposal of child's stool and instances of handwash. There has been a decline in knowledge in giving colostrum to the child and some ANC services.

Funds

- Health Risk Fund and Food Security Fund are the two VO-level funds available to SHG members.
- Awareness of the HRF among the VO executive members and the CMs of both the treatment and control arms is high. Nearly all the CMs were aware of the process of requesting the HRF and CMs in the treatment arm facilitated uptake of HRF by the SHG members.
- Awareness of the FSF is similar across arms among the key cadres and committees involved in facilitating its use. Most of the PC members, who are responsible for coordinating the purchase of food, were aware of their responsibilities but only a few knew of the FSF. In both arms some PC members said they prioritized the poorest of the poor in making their decision about the types of food items to purchase.
- Most CMs across both arms knew their role of developing microplans and presenting demand for the commodities to the VO. A majority of the CMs across arms noted prioritizing the FSF for the poorest of the poor members. In addition, a few CMs in the treatment arm reported prioritizing women in the 1000-day window, which is a focus emphasized in the treatment arm.

Kitchen gardens

- The CMs and VRPs play a critical role in the promotion and setting-up of the kitchen gardens. Both these cadres report similar level of involvement in the treatment and control arms. Majority of the CMs in the treatment arm mentioned that they suggest different planting techniques to grow vegetables in limited space and visit gardens of SHG members. Compared to CMs in the treatment arm, fewer CMs in the control arm confirmed that SHG members associated with them have set up kitchen gardens.
- Majority of the VRPs in the treatment and control areas reported informing SHG members about the benefits, implementation and micro-planning of kitchen gardens. Almost all the VRPs said that they assisted with the setting up and follow-up of the kitchen gardens by providing technical advice on planting, weeding and so on.

- LHS reported that Kisaan Salaahkars and Krishi Samanvayaks inputs and knowledge will be helpful for setting up and maintaining kitchen gardens, but they mainly work with large farm holders and with the men in the community. However, LHS work with the Block Agricultural Officer to keep them informed about the activities and to seek support from the Kisaan Salaahkars and Samanvayaks and they also connect the VRPs to these agriculture extension workers.

Box 7.3: A typical SHG meeting

Typically, the SHG meetings are held in one of the SHG members' homes in an area where a group of women can be accommodated. In the rainy season, it becomes difficult to find a place to hold the meetings as well as for members to get together as the villages become muddy. Usually SHG meetings are held in the afternoon, considering the availability of the SHG members. During peak agricultural seasons, meetings are held either early in the morning (even as early as 6 am) or in the late afternoon as women are away for work in the fields.

Although the time for the meeting is announced, it is typical for members to not arrive on time. At least 10 women are required for the meeting to commence. Therefore, efforts are made to assemble as many members as possible. Once one or two members arrive, they start calling or visiting other households to bring other members.

CMs in some cases warned the members saying, "Everyone must come to the next meeting on time, in full attendance or else there will be a fine"

A meeting typically lasts for 50 minutes but there is considerable variation in this average time reported. Some meetings last for as short as 20 minutes while some extend up to 90 minutes. Meetings are usually short when members simply collect to deposit their regular savings.

Usually the community mobilizer (CM) leads the meeting. Women spread a mat, sit in a circle, say a prayer, introduce themselves, and the CM marks their attendance. The savings process begins with everyone contributing 10 rupees. The CM and the treasurer count the money and CM enters the amount in the register. This is followed by the CM and treasurer checking on the existing money in the box, totaling this amount, and entering it in the register. All the members sign, indicating their agreement with the total amount of money noted.

While the CM updates the registers, several parallel conversations take place with women discussing their family or village issues (e.g., festivals, marriages, death, domestic violence, etc.) with each other. Sometimes the CMs also participate in these discussions, and other topics get neglected. In addition, SHG members' children or the neighborhood children present at the meeting place distract the meeting proceedings. The CM updates the passbooks of all SHG members. Usually during the savings process, discussions begin about the availability of loans, loan repayment, and other issues.

Once the savings process is completed, other topics are discussed. *[In 18 SHG meetings, health and nutrition topics were discussed]*. CM starts the discussion with recapping the previous week's information and tries to engage the women by asking them questions and eliciting responses. The nutrition topics that were discussed include dietary diversity, pregnancy and new-born care, breastfeeding, and complementary feeding. The use of flipcharts, flash cards or role playing is not common during the dissemination of nutrition information. *[Only in 5 SHG meetings, CMs used any kind of visual aids]*. In general, there were no links made between the information disseminated and the resources available to be able to implement the suggestions such as using of kitchen gardens for improving dietary diversity. *[Annaprashan Diwas was mentioned in two meetings during the complementary feeding discussion, and kitchen gardens were mentioned once.]*

Sometimes other topics (e.g., insurance policy, toilet construction, loans and savings) take prominence and health and nutrition topics are either not discussed or discussed for a very limited time. *[In case of 4 SHGs, lengthy discussions on insurance policy, its benefits and CMs urging the members to apply for the insurance policy; in 8 SHGs, CMs emphasized the need to construct the toilets and women talked about the financial difficulties in doing so. In 7 SHGs, issues related to savings, such as the need to save regularly, the benefits of savings, and loan repayment were central to the discussions. In 3 SHG meetings, there were no discussions.]*.

Some SHG members complained- *"Here the money is given to only those who are known to each other, and in the end we have to get money from somewhere else to get our work done. What benefit did we have by joining the SHG when our work didn't get done? The ones who are running the SHG they have the most benefit, they have become fat by eating it (the money). Poor people and poor didis[women] did not get any benefit."*
Although women digress and discuss multiple topics, once the CM starts discussing the nutrition information, women become attentive and listen to CM. However, sometimes when women digress into other topics, discussions get discontinued. When the CMs are self-confident, they can hold the attention of the group and are responsive to the members. *[In 17 SHG meetings, CMs were found to be in command of the proceedings. They were firm but responsive, and engaged with the SHG members.]* There are instances where women are distracted and express interest in ending the meeting quickly as they either have to go home and work, or are coming back from the fields and have to get back home.
In general, there is a cordial relationship between CMs and the SHG members. *[In cases, where CMs are not in charge of the meeting (n=3), there does not seem to be any relationship between the members and the CM.]*. Some SHG members felt that they did not have any say in the proceedings of the meeting. One on occasion when the CM asked if they should start the discussion, the SHG members told the CM, *"do as you usually do, do it like you do, we can't say anything, it is your wish."* This was one of the group meetings that was held at the CM's house and her husband was helping organize it.
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Overall comments: Prior to introducing new interventions, first, it is imperative that the existing base platform is strong. In case of SHGs, it means first that the SHGs have well-established routines and the core of the SHG platform i.e., savings and credit, is functional and the routine SHG meetings are taking place. In the treatment arm, there are a few SHGs where CMs are continuing to motivate women to save regularly and to repay the loans. Second, the quality of the existing system has to be sound and it should be following recommended practices. The SHG meetings should be led by the CMs. We found that in a few SHGs CMs' family members were conducting the SHG meetings. This has implications for SHG members' trust in the SHG, as well as on the proceedings of SHG meetings. Finally, an assessment of existing cadre's workload is needed prior to adding on new streams of work. CMs are the frontline cadre for the JEEViKA program, and therefore any programs implemented through the JEEViKA platform converge on the CMs. When multiple tasks are assigned to them, tasks that need immediate attention are prioritized over the health and nutrition information dissemination. Efforts should be made to examine the CMs responsibilities and how they can be supported to implement the MC pilot.

8. RESULTS: Implementation Processes: Strengthening convergence to improve access to and utilization of key public services

8.1 Convergence and coordination of CM with frontline workers

The following information about awareness of the Community Mobilizer of the different health workers in their villages and any experience of interacting with them has been reported collectively for all the twenty-six CMs interviewed. The results have not been delineated by arm.

CM awareness of the presence of frontline workers was reasonably high. When asked to name government workers in their village who work with women and children on health and nutrition, more than half of the CMs (n=16) mentioned the AWW, and almost as many (n=15) mentioned the ASHA. A few CMs (n=7) also mentioned the ANM. CMs, however, do not have a clear understanding of the responsibilities of each of these FLWs. Ten CMs said the work of the AWW included provision of the Take-home ration (THR) to women, and teaching children. Fewer than half the CMs (n=9) recognized that these are actually the ASHA's tasks. Two of the CMs also mentioned that the ASHA conducts home visits. Only five CMs knew that it is the ANM's duty to carry out immunization of pregnant women and young children, and four of them incorrectly attributed this role to the ASHA. A sizeable proportion of the sample did not know of the responsibilities of different frontline workers – thirteen did not know of the ANM's duties, six of the ASHA's duties and four of the AWW's. Eight of the CMs were unable to give information about the tasks of any of the three frontline workers.

Based on this, we can conclude that there are two fundamental issues which likely pose a barrier to the CMs reaching out to these workers and coordinating with them – complete lack of knowledge of the FLWs role in some cases, and lack of delineation between roles of the different FLWs in others.

In contrast, awareness of the existence and role of the CMs among FLWs was high. All the ASHAs and AWWs interviewed confirmed knowing of the CM, but one-third of the AWWs and two-fifths of the ASHA did not have any contact with a CM. Almost all of the ASHAs (n=30) knew that the CM facilitates SHG meetings, and a sizeable proportion (n=19) knew that they also keep records of the savings and lending activities in these meetings. The level of awareness among the AWWs was even higher. All but one of the AWWs (n=32) was aware that the CM facilitated SHG meetings, and more than half (n=22) knew that they were responsible also for record keeping.

In the case of the ASHAs and the CMs, awareness of each other's responsibilities does not seem to translate into better interaction. Nineteen ASHAs who were interviewed said they did not help the CM in any of her activities or receive help from the CM in theirs. From among the remaining respondents, four mentioned that the CM visits the Annaprashan Diwas and VHND and speaks about health and nutrition in these events, or provides other forms of support for these community events. One ASHA mentioned that the CM speaks about the availability of routine immunization from the Anganwadi Centre, and that she talks to pregnant and lactating women about health and nutrition, and acknowledged that this has helped increase awareness in the community. One ASHA also mentioned how the CM uses SHG meetings to encourage pregnant women to visit the hospital and inform the ASHA about the pregnancy.

Two of the ASHAs mentioned that they attended SHG meetings to save money. One said she helps in book-keeping as well, and one said she encouraged members to repay their loans. Two of the ASHAs motivate SHG members to make use of the loans given from the SHG as the rate of interest charged is lower than the market rate.

Finally, one ASHA said that no SHG meeting has taken place in her village for two years., and another said that the SHGs have not been operational for the past five months. One ASHA said that she helps the CM in her work but the CM doesn't reciprocate. Another mentioned that a new CM was appointed a year ago but there is no information of her and what she does. Overall, it would appear that there is considerable unrealized potential here for these workers to coordinate with one another to make their tasks easier.

Based on the AWWs reports, it appears that coordination between the AWW and CM is more frequent. For instance, six AWWs mentioned that the CM helps them on the day of VHSND, and five AWWs said that CM brings women or children from the community for vaccination at the VHSND. Four AWWs said the CM talks to women about the need and benefits of timely immunization. Five AWWs reported that the CM in their area also encourages women to visit the Anganwadi Centre. These contributions of the CM all boost the work and outcomes of the AWW. Besides this, three AWWs each mentioned how the CM talks about cleanliness, gives information to pregnant women on health and nutrition, and talks about the VHND – all of which help the AWW in her routine work. A mutually beneficial relationship is shared by several AWWs with the CMs as they too help the CM in her tasks. Nine AWWs spoke about encouraging the SHG women they interact with to save money. Three AWWs mentioned encouraging community women to join SHGs and save money, help by giving information on health and nutrition in SHG meetings that they attend and encourage SHG women to repay their loans. However, this mutual assistance is not a universal phenomenon. Ten AWWs said that they did not help the CM and ten others said that the CM did not help them. The reason given was mostly the same: a lack of interaction with the other individual.

The CMs gave similar responses with fourteen mentioning that they do not assist the ASHA, AWW or ANM in their duties. This mostly stemmed from a lack of knowledge of their responsibilities. Only five CMs out of twenty-six reported that they help the AWW, ASHA and ANM "in all their work". Four CMs were only aware of the AWW's tasks and helped her, and there were three CMs who helped the ASHA but not the other frontline workers.

As pointed out by the staff members of JEEViKA, the work of these health workers and the CM is similar in scope in areas of counselling and informing women about their entitlements and helping them access these. The main barrier to the government workers coordinating with the JEEViKA CM and vice versa is the lack of knowledge of what each individual's responsibilities are. Several FLWs and CMs mentioned that "they did not have any interaction" with each other, and so they did not help the other worker in their tasks. A better understanding of each other's roles and the intersection of these with their own tasks would lead to greater coordination of efforts, and potentially to better outcomes.

One way of facilitating interaction and coordination between workers would be mandating certain tasks to be carried out jointly. The introduction of HSC should ideally bridge the gap between the work of the ICDS department and the JEEViKA-MC pilot as the HSC's duties include helping the AWW in organizing community events, and helping the AWW and ASHA's work by also conducting home visits. However, there is a huge potential for duplication of work by the different agents which should be kept in mind while creating new roles and responsibilities.

8.2 Convergence and coordination committees

The existence and functionality of the convergence committees was gauged through interviews with the JEEViKA staff and government frontline workers (AWW and ASHA). The discussion below is a synthesis of what was reported by the respondents. Due to the small size of the sample, the responses have not been quantified or identified by designation to preserve the anonymity of the respondents.

8.2.1 Awareness among JEEViKA staff

The convergence committees were formed over a year ago. The Panchayat and Block level convergence committees were instituted only in the treatment arm. Though the committees are expected to meet every month, they have only met a maximum of two times since their formation. While the immediate reason for this irregularity is the prioritization of government programs or activities such as the ODF drive, a more deep-seated issue is that members of the committees at each of the levels are not as involved as they need to be for the committees to meet regularly.

The District Level Coordination Committee comprises of the District Magistrate, JEEViKA DPM, Civil Surgeon, ICDS DPO, District Supplies Officer, District Coordinator for Sanitation, Executive Engineer – PHED, District Agricultural Officer, District Education Officer, JEEViKA Manager- Health and Nutrition and the World Bank MC pilot consultants [World Bank, 2016]. The committee at the district level is presided by the District Magistrate (DM); however, he is usually too busy to attend the meeting. Awareness of the district level convergence committees was high among the district-level JEEViKA staff. However, it appears that meetings are not taking place regularly. Two people echoed the same sentiments:

"On the ground, committees have been formed, but for some reason or the other the meetings are not taking place because [...] the staff is on leave or the staff is engaged with some other program."

"It (the district-level coordination committee) was formed over a year ago. Meetings happen once a month but things have been busy in the last few months so meetings haven't taken place."

Apart from the issues that arise from having to coordinate the schedules of several people across various different departments, another problem that was faced was resistance from other departments to entertaining requests from the JEEViKA staff. As one respondent put it,

"The government officials sometimes feel that the JEEViKA staff is interfering when it is providing support and trying to give a better platform."

The main topics of discussion at these meetings are the various services being provided by different departments, such as immunization at Primary Healthcare Centers, services provided at the Annaprashan Diwas and Bachpan Diwas, ways to provide information about these services, and problems faced by members of the community in accessing these services.

At the block level, doctors from the Health department, supply inspector, BPM, Block Agricultural Officer (BAO), Block Education Officer (BEO), Child Development Program Officer (CDPO), Block Development Officer (BDO), and the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) Program Officer are also part of the committee. The BPM sets the agenda for the committee at the block level. A specific day of the month had been fixed for the block coordination committee meeting.

Among the JEEViKA staff at the block level, awareness of the block level convergence committees was high. Only one respondent was unaware of the existence of these committees. Two respondents mentioned that the purpose of these committees was to encourage convergence between the various government departments, to tie up certain services with JEEViKA, and to ensure that the different departments work in coordination with one another for the benefit of the community. One respondent said

"If there are any issues in the activities and services of different government departments, they are discussed and sorted out in the meeting. The BPM convenes the meeting and sets the agenda at the block level meeting."

Although there is clarity around the purpose and existence of these block-level committees, similar issues influencing functioning of the district level convergence committees appear to plague these committees as well. The meetings had not been held regularly – one respondent said the block committee has only met once, another reported that the committee had not met in the 2 months preceding the interview (March and April 2017). The main reason cited was coordinating schedules of representatives from various government departments to find a common suitable time. If the Block Development Officer is unavailable, meetings cannot be scheduled, and this had caused delays in two instances.

At the Panchayat level, awareness of the existence, composition and role of the GP level convergence committees among the JEEViKA staff was high. The representative from the JEEViKA staff in these meetings is the AC, though in some cases the CC also participates. The AWW, ASHA and ANM are the government frontline workers who are meant to attend these meetings, along with representatives from other government departments. The Mukhiya presides over these meetings, while the AC sets the agenda. Only two out of the sixteen ASHA and three of the seventeen AWW interviewed from the treatment arm reported having attended a convergence meeting.

Some respondents reported that meetings have taken place 2-3 times, or that the meetings are happening regularly as planned. However, two others reported that the meetings are not happening regularly in their GPs. One respondent said,

"Mostly the Mukhiya or ANM is busy. This would be a beneficial meeting but right now all members are occupied with their individual work so scheduling a meeting is difficult."

Another said, *"I facilitated the formation of convergence committees in 5 out of 7 panchayats last year between August and December. [...] But over time the Mukhiya, who is part of the panchayat convergence meeting and needs to be present for the meeting, is often not available. Even though the Lady Supervisor is there in the meetings, the absence of the Mukhiya leads to gaps in meetings as the Mukhiya needs to know the issues in his/her panchayat. Sometimes we get so busy with our work and responsibilities that the focus on these meetings is lost. For example, meetings have not happened since Dec-Jan at the panchayat and block level."*

Overall, it appears that issues around scheduling continue to remain the cause of infrequent coordination committee meetings even at the *Gram Panchayat* level. However, it appears that the panchayat level meetings are happening more regularly than those at the block or district level, most likely because the more senior officials have busier schedules and find it harder to coordinate.

The most common issue discussed in the coordination meetings at the GP level was the lack of IFA tablets at the AWC, and possible alternatives to these government-provided tablets. Other issues were the low attendance of women at the Routine Immunization Day, delayed payments under the NREGA mulberry project, and general functioning of the AWC.

8.2.2 Awareness among government frontline workers

In contrast to the JEEViKA staff, the awareness of these coordination committees among ASHA and AWW was quite low, even though (on paper) they are meant to be part of the GP level coordination committees. More ASHAs and AWWs' in the treatment arm were aware of the committees compared to those in the control arm, as would be expected if these committees are being strengthened only in the treatment panchayats (Tables 8.1 and 8.2). ASHAs and AWWs in the treatment arm knew who attended the panchayat coordination committee meetings and frequency of the meetings. According to ASHAs these meetings were held once a month or whenever a problem arose. Few ASHAs were aware of the topics discussed at these meetings. The topics listed by ASHAs include supply side bottlenecks in

government services, issues at the ration shop and infrastructure related issues. These topics are in congruence with the topics mentioned by the JEEViKA staff. In contrast, a majority of the AWWs reported that these meetings had not been held or that they didn't know when they were held. AWWs in the treatment arm reported that the topics of discussion in the GP coordination committee meetings were supply side bottlenecks in government services, problems at the AWC and infrastructure related issues.

Table 8.1: ASHAs' knowledge of and perception about the GP coordination committee

	Treatment arm (N=16)	Control arm (N=16)	All (N=32)
Heard of the Panchayat Coordination Committee	6	1	7
Who are the members?			
Mukhiya	5	1	6
AWW	1	0	1
ASHA	1	0	1
CM	1	0	1
Ward member	5	1	6
Sarpanch	4	0	4
Don't know	1	0	1
How frequently do they meet?			
Once a month	2	0	2
Once in six months	0	1	1
When there is a problem	1	0	1
Have not met yet	1	0	1
Don't know	2	0	2
What topics are discussed?			
Supply side bottlenecks in government services	1	1	2
Issues at the ration shop	1	0	1
Infrastructure issues (roads, electricity, etc)	1	0	1
Don't know	3	0	3

Source: Authors' calculations.

Table 8.2: AWWs' knowledge of and perception about the Panchayat Coordination Committee

	Treatment arm (N=17)	Control arm (N=16)	All (N=33)
	n	n	n
Heard of the Panchayat Coordination Committee	6	5	11
Who are the members?			
Mukhiya	4	5	9
LS	0	2	2
ANM	1	2	3
AWW	1	3	4
ASHA	0	1	1
CM	0	0	0
Ward member	5	5	10
Sarpanch	4	2	6
Not commenced yet	1	0	1
How frequently do they meet?			
Once a month	1	0	1
Once in two months	1	0	1
Once in six months	0	1	1
Have not met yet	2	1	3
Don't know	2	3	5
What topics are discussed?			
Supply side bottlenecks in government services	2	0	2
Problems at AWC	1	0	1
Infrastructure issues (roads, electricity, etc)	1	0	1
Health and nutrition discussions	0	1	1

	Treatment arm (N=17)	Control arm (N=16)	All (N=33)
	n	n	n
Raising awareness of drives and events	0	1	1
Not commenced yet	1	0	1

Source: Authors' calculations.

8.2.3 Strengths and limitations of this platform

Despite the difficulties faced in routinizing the coordination meetings, convergence with ICDS and Health departments has begun. For example, the frontline workers are required to attend VO meetings. Health-related topics are frequently discussed in the meetings of convergence committees, such as the supply of IFA tablets, and immunization at the PHC. It has been recognized that the AWC, PHC and the JEEViKA-MC pilot are trying to reach the same beneficiaries. It has been harder to liaise with the agricultural department as it only works with large farmers and large areas of land while JEEViKA is promoting production for self-consumption on small plots of land.

The purpose of the coordination meetings is to increase the accountability of different workers and make them work harder towards their targets. As part of these meetings, possible solutions for issues of access to services are explored. The Area Coordinator and the Community Coordinator prepare a report of the Panchayat coordination committee which is compiled at the block level. All issues raised at the Panchayat level are escalated up to the block, and ones at the block level to the district. However, some of the suggestions made by the JEEViKA staff in these meetings are not well received or readily accepted by the government workers concerned. For example, one respondent noted - *"The government officials sometimes feel that the JEEViKA staff is interfering when instead it is providing support and trying to give a better platform."*

Despite some improvements in convergence, these committees suffer from a fundamental problem which was expressed well by one of the respondents – *"The convergence committee is not empowered to do more - it cannot make any decisions. For instance, they cannot change the guidelines for agriculture, health and so on. They are limited to monitoring the performance of community events."*

To summarize, there is awareness about convergence committees among various stakeholders; however, the committees are not active and do meet regularly. For several reasons, the scope of these committees has not been fully realized. First, it has been difficult to schedule the meetings. As the members of the committees belong to various departments and are engaged in different activities, finding a common time to meet has been considerable barrier to organizing meetings. It has been particularly difficult to ensure the presence of the Mukhiya, the BDO and the DM who preside over the Panchayat, Block and District level coordination committees, respectively. Second, these committees have not been accepted by members of other non-JEEViKA departments. It is likely that the other departments do not consider these committees to be relevant to their work. Directives for holding these meetings regularly have to come from the State or District levels, with each department agreeing to cooperate. Directives that come only from JEEViKA are not heeded by workers in other departments, who are only answerable to their superiors. Finally, another reason for irregular meetings is that the members are constrained by multiple work responsibilities. One way to address this issue is to hold the meetings on a fixed day every month.

Summary

- Though the CMs were aware of the existence of the FLWs and that they worked with women and children in the 1000-day window, their awareness of the exact roles of each FLW was poor. Often they thought tasks assigned to one FLW were in fact the responsibility of the other.

- Awareness of the CM and her roles was higher among the ASHA and AWW, perhaps because some of them were SHG members themselves (or had family members who were).
- Coordination between the CMs and ASHAs was poor, with more than half the ASHAs reporting that they did not assist the CM in her duties, and in turn did not receive any assistance from her in performing their own.
- Coordination between the AWWs and the CMs was slightly better, with several AWWs mentioning that the CM provides assistance at the VHSND, and informs SHG women about the benefits of immunization.
- Overall, there is not much evidence of coordination between these FLWs and the CMs, despite the considerable degree of overlap in their target populations and the information they provide.

Convergence coordination committees

- Awareness of the district level convergence committees was high among the district-level JEEViKA staff and the committees were formed more than a year prior to the interview. However, the meetings do not take place regularly, either due to coordination issues or resistance from other departments to participate.
- Among the JEEViKA staff at the block level, there was clarity around the existence and purpose of these block level convergence committees. However, issues around their functioning were raised.
- Awareness of the existence, composition and role of the GP level convergence committees among the JEEViKA staff was high. Issues around the scheduling, though not as severe as they are at higher levels, continue to remain a problem even at the GP level.
- In contrast to the JEEViKA staff, ASHA and AWW awareness of the GP level coordination committee was quite low, even though they are meant to be part of the GP level coordination committees.

9. RESULTS: Exposure: Reach of key messages

In this section, we discuss the reach of key BCC messages from the intervention, and the knowledge of these messages at the household level. Data will be presented by arm when the differences across arms are significant or of interest, and will be pooled where there are no significant differences. In figures, significant differences across arms will be represented using a star above or beside the relevant variables.

9.1 Awareness of and participation in SHGs (and VOs)

As mentioned above, about 68% of the women interviewed as part of the household survey were currently part of an SHG (refer to Table 6.1 in Chapter 6). This proportion did not differ across treatment and control arm. Individuals in the control arm had, on average, been part of the SHG for slightly longer (3.3 vs 3.0 years, $p<0.05$). 98 percent of the respondents reported that their SHG had savings and credit activities, and 97 percent of the respondents who reported having these activities also reported that they participated in them actively (Table 6.1).

Among the women who responded that they were not members of an SHG, the main reason cited was that another household member was already active (29 percent, Figure 9-1), followed by lack of interest (26 percent). Only 5 percent reported that the reason they were not members was because of a lack of time. None of these differences were significant across arms.

Only about a fifth of the respondents were portfolio holders at the time of the survey (Table 9.1). Of the portfolio holders, only 50 percent attended VO meetings twice a month, and this proportion was not different across treatment and control arm. A significantly higher proportion of the portfolio holders in the treatment arm responded that they attended VO meetings only once every few months (7.5 vs 0.0, $p<0.05$). Among those who attended the VO meetings less frequently than twice a month, the main reason for not attending was lack of information about when the meetings were held. The proportion reporting this was significantly higher in the treatment arm than in the control arm (60 vs 35.3, $p<0.01$). The other reason for not attending meetings was that they took up too much time. A considerably larger proportion of the control arm portfolio holders responded also that they did not know that they had to attend the VO meetings (11.8 vs 0.0), though due to small sample sizes we could not reject the hypothesis that the proportions are the same across arms.

Finally, awareness of JEEViKA was low (Figure 9-2). Fifty eight percent of the respondents said that they did not know which organization was supporting their SHG. Only 18 percent of the overall sample responded that JEEViKA was supporting their SHG– this proportion was higher in treatment arm than in control arm (22.4 vs 14.1) but the difference was not statistically significant.

Table 9.1: Portfolio holders and VO participation

	Treatment arm		Control arm		All		p-value
	Mean (SD)/ Proportion	N	Mean (SD)/ Proportion	N	Mean (SD)/ Proportion	N	T vs C
Currently a portfolio holder	20.8	192	18.5	184	19.7	376	0.53
Portfolio held:							
President	35.0	40	38.2	34	36.5	74	0.81
Treasurer	40.0	40	26.5	34	33.8	74	0.10
Secretary	25.0	40	35.3	34	29.7	74	0.40
Frequency of attending VO meetings:							
Once a month	22.5	40	32.4	34	27.0	74	0.25
Twice a month	50.0	40	50.0	34	50.0	74	1.00
Once every few months	7.5	40	0.0	34	4.1	74	0.02*
Have never attended a VO meeting	17.5	40	17.7	34	17.6	74	0.98
Reasons for not attending all VO meetings:							
Do not know when the meetings are held	60.0	20	35.3	17	48.7	37	0.01*
Too far away	5.0	20	5.9	17	5.4	37	0.89
Take up too much time	10.0	20	17.7	17	13.5	37	0.49
Do not know that portfolio-holders should attend	0.0	20	11.8	17	5.4	37	0.06*
Discussions not helpful	0.0	20	0.0	17	0.0	37	-

Source: Authors' calculations. Note: * indicates a p-value <0.05.

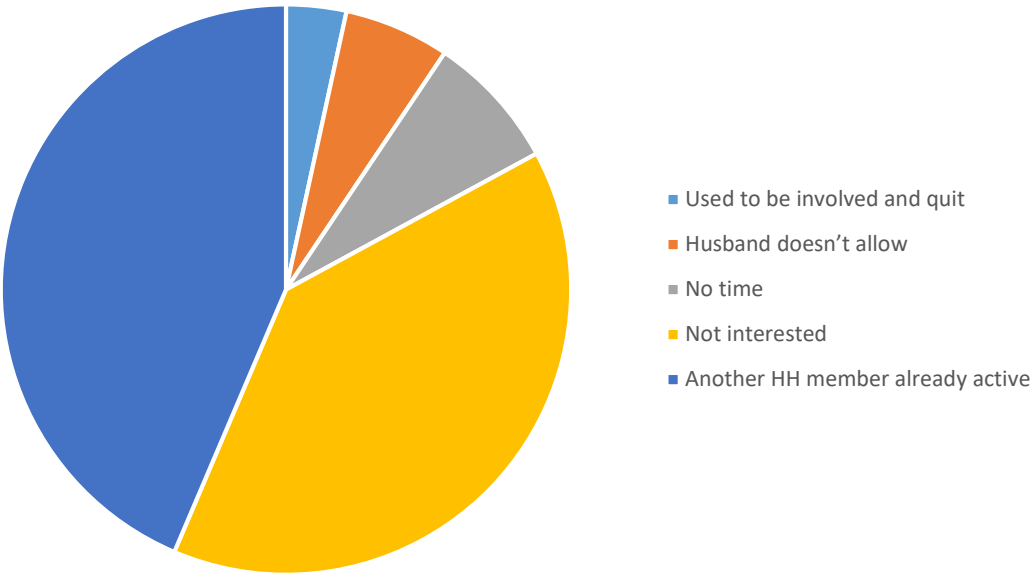

Figure 9.1 Reasons for not being part of an SHG

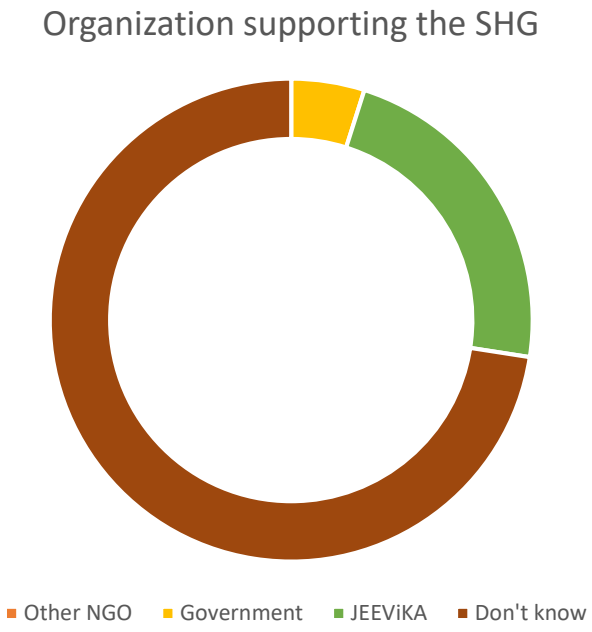

Figure 9.2 Respondents knowledge of the organization supporting the SHG

9.2 Exposure to information

Figure 9-3 depicts the topics discussed in the SHG meetings in the 12 months preceding the survey by respondents in the treatment and control arm. More than 95 percent of the respondents reported discussing savings and credit in their SHG meetings. WASH was reported as being discussed by about 60% of the respondents. All other topics were discussed less frequently. A significantly greater proportion of women in the treatment arm reported discussing community events like the Annaprashan and Bachpan Diwas (52.6 vs 40.8, p<0.01). A higher proportion of treatment arm respondents also reported discussing a range of nutrition topics such as ANC, complication readiness during pregnancy, birth preparedness, care of the newborn, post-partum complications in mother and newborn, and the importance of dietary diversity, but none of these differences were significant, perhaps because of small sample sizes. The proportions of women who reported discussing kitchen garden (*poshak badi*) cultivation, different ways of achieving food security, use of the FSF, use of HRF for healthcare, government schemes and breastfeeding practices was comparable across the treatment and control arm.

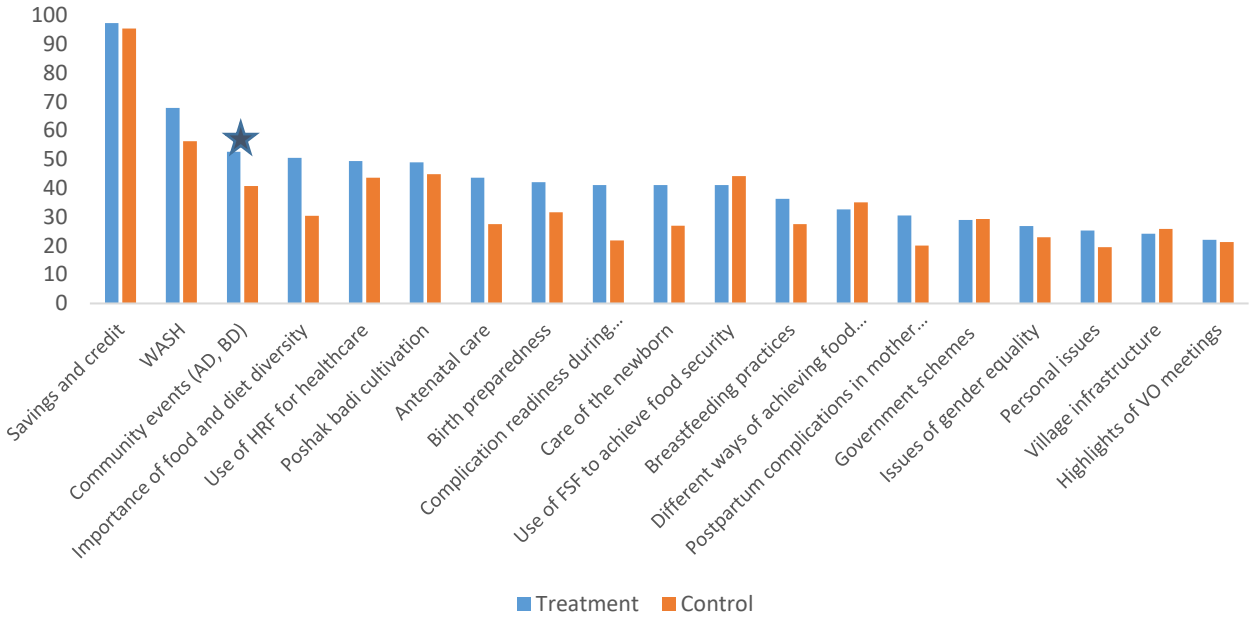

Figure 9.3 Topics discussed in the SHG meetings

9.3 Knowledge of H&N, loans, and services available through SHGs, VOs, and government

We present below some results on the knowledge of health and nutrition. In order to make it easier to follow we have divided this up into multiple sections based on the type of information we asked.

Knowledge related to food and food-types

We asked the households about the types of foods that serve various functions (Table 9.2). Four out of five (80.3 percent) of the households correctly reported that grains provide the body with energy, with a significantly higher proportion in the treatment arm reporting this than in the control arm (83.6 vs 76.7, p<0.05). 9.6 percent of households also mentioned potatoes and sweet potatoes as providing energy. However, the proportion of households mentioning other food types (oil and ghee, sugar) was less than 5 percent. These other differences were not significant across treatment and control arm.

The main responses to foods that help the body grow and repair was all pulses (70.1 percent) followed by milk and curd (67.9 percent). Meat and fish were both reported by around 18-19 percent of the households. A large proportion – more than 70 percent of households – correctly reported that green leafy vegetables protect the body from illness, and slightly less than half (46 percent) also reported that

fruits build immunity. And finally, 78 percent of the households said that milk and milk products make bones stronger, and 49.6 percent of households correctly said green leafy vegetables also served the same purpose. None of these proportions was significantly different across arms. The only difference was that a larger proportion of treatment arm households reported that they did not know what foods made bones stronger (8.4 vs 3.8, $p<0.05$).

Table 9.2: Household knowledge about food types and their purpose

	Treatment arm (N=286)	Control arm (N=266)	All (N=552)	p-values
	Proportion	Proportion	Proportion	T vs C
Foods that provide the body with energy				
All grains	83.6	76.7	80.3	0.05*
Sugar, jaggery	0.7	0.0	0.4	0.31
Oil, ghee	4.6	4.5	4.5	0.99
Potato, sweet potato	8.7	10.5	9.6	0.60
Don't know	0.4	0.0	0.2	0.31
Foods that help the body grow and repair				
All pulses	72.0	68.1	70.1	0.42
Egg	2.8	1.1	2.0	0.38
Meat	17.8	21.8	19.8	0.60
Fish	16.1	20.7	18.3	0.50
Milk, curd	67.1	68.8	67.9	0.75
Soybean	1.4	0.8	1.1	0.67
Don't know	1.4	0.8	1.1	0.49
Foods that protect us from illness				
Green leafy vegetables	74.5	70.7	72.6	0.36
Fruits	46.2	45.9	46.0	0.94
Other (see responses)	44.4	52.3	48.2	0.18
Don't know	7.0	2.6	4.9	0.19
Foods that make our bones stronger				
Milk and milk products	75.9	80.5	78.1	0.14
Green leafy vegetables	51.1	48.1	49.6	0.54
Meat products	21.3	24.1	22.6	0.49
Don't know	8.4	3.8	6.2	0.03*

Source: Authors' calculations.
Note: * indicates a p-value <0.05.

Almost 65 percent of households incorrectly identified milk as an iron-rich food, and 23 percent said curd was also rich in iron (Figure 9.4). This appears to be a widespread misconception. Reassuringly, close to 60 percent said that green leafy vegetables were good sources of iron, followed by 26.8 who reported lentils. A negligible proportion mentioned meat as a source of iron. However, again, none of these were significantly different across arms.

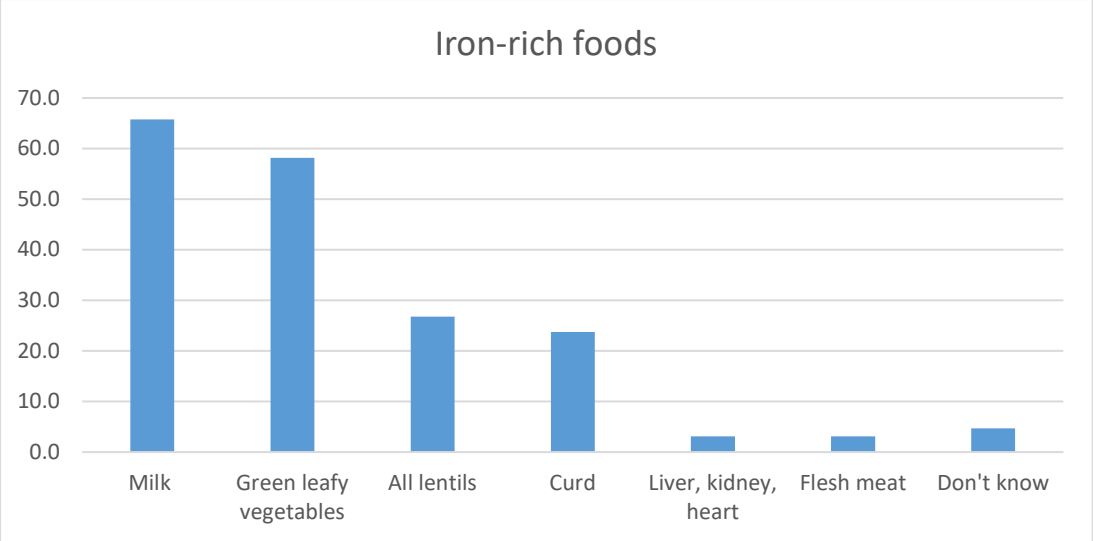

Figure 9.4 Proportion reporting various foods are rich in iron

About 64.3 percent, or close to two-thirds of households, correctly reported that orange colored fruits or vegetables were good sources of vitamin A (Figure 9-5). About a third of the households also mentioned green leafy vegetables as sources of vitamin A. Unfortunately, a substantial proportion - 57.6 percent - incorrectly mentioned cow's milk as a good source. Again, none of these differences was statistically variable across the treatment and control arm.

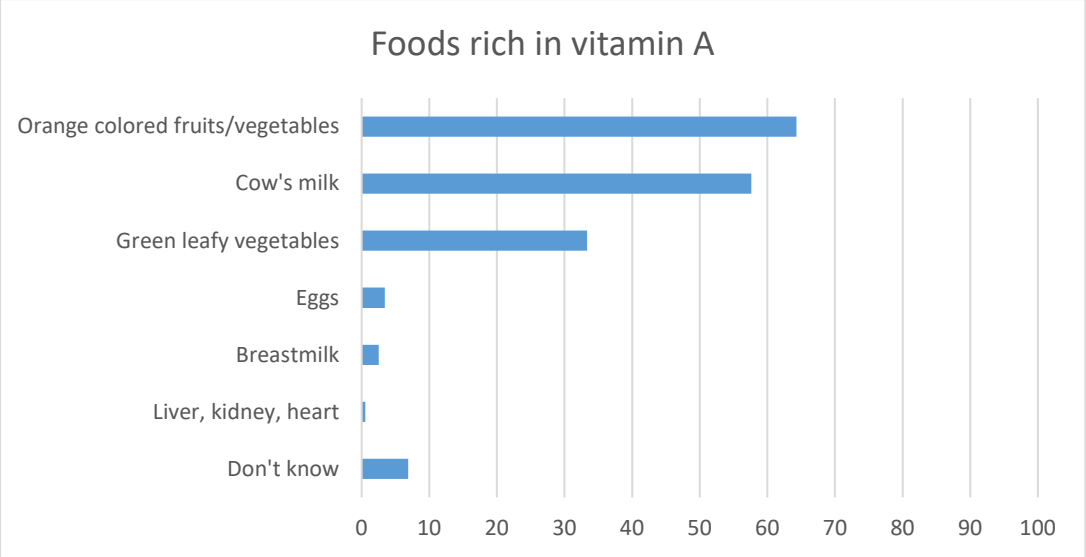

Figure 9.5 Proportion who mentioned various foods as sources of vitamin A

Knowledge of hygiene

The main reason cited for keeping surroundings clean was that it helped keep people healthy and prevented them from falling sick, reported by more than 95 percent of the sample (Figure 9.6). This was followed by the response that it improves the image of the village, provided by 37 percent of the sample. A larger proportion of the sample in the treatment arm reported that it allows them to work better for longer periods of time, but this difference was not statistically significant.

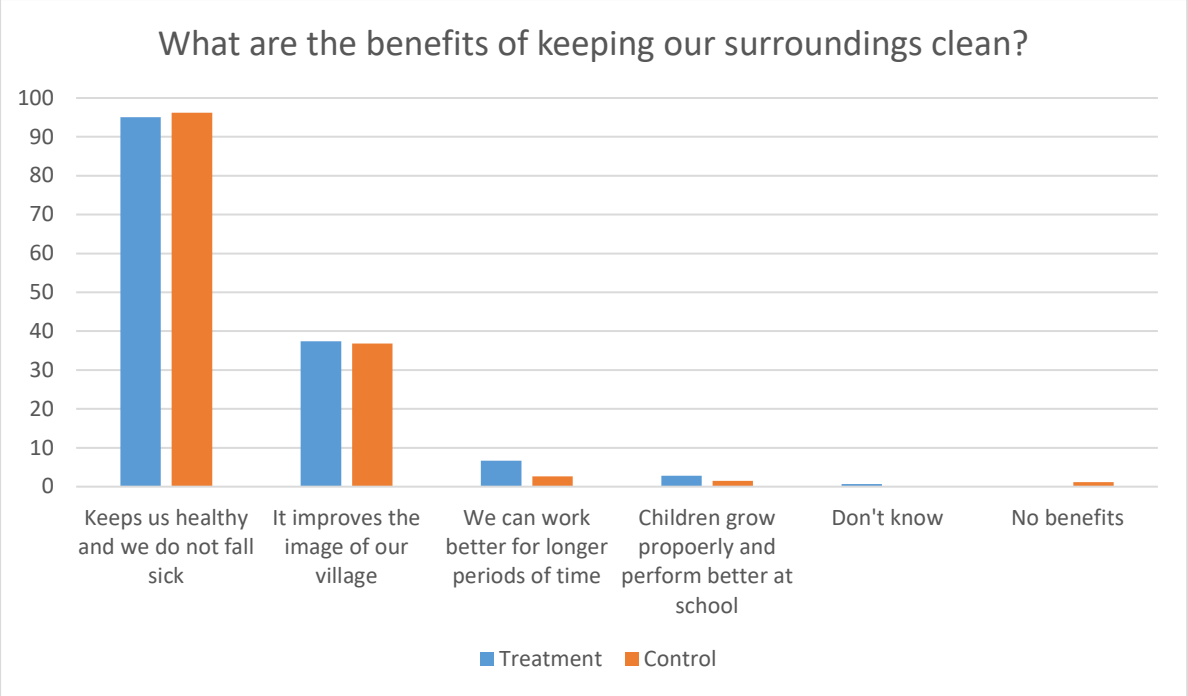

Figure 9.6 Knowledge of the benefits of keeping one's surroundings clean

Disappointingly, the most common response to how to dispose of child stools was to leave them in the open, and this was given by more than 92 percent of the total sample, with no significant differences across arms (Figure 9.7). A significantly higher proportion of the respondents in the treatment arm said that stools should be buried (10.5 vs 2.6, $p<0.05$). Other responses such as rinse into drain or ditch, and flush into toilet or latrine received fewer than 3 percent of responses.

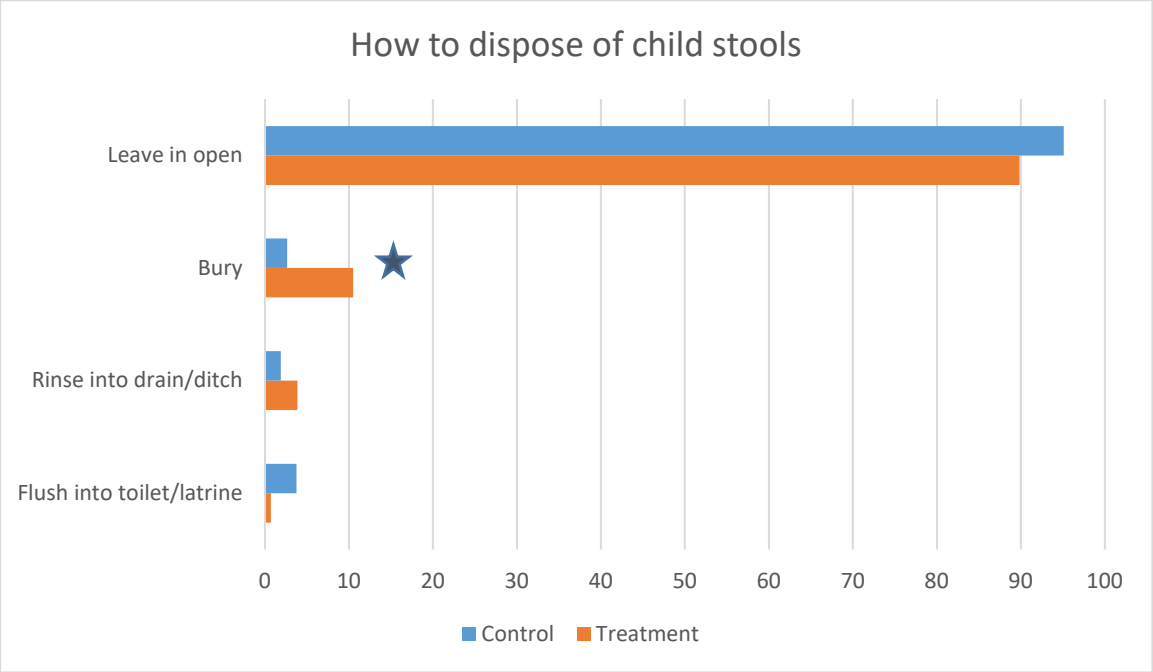

Figure 9.7 Knowledge of the ways in which to dispose of child stools

Eighty-three percent of the respondents said that mothers should wash their hands after cleaning a child who has defecated, 62 percent said this should be done before feeding a child, 59.4 percent said after using the toilet, and 56.3 percent said before eating (Figure 9.8). However, none of these differences were significantly different across treatment and control arm.

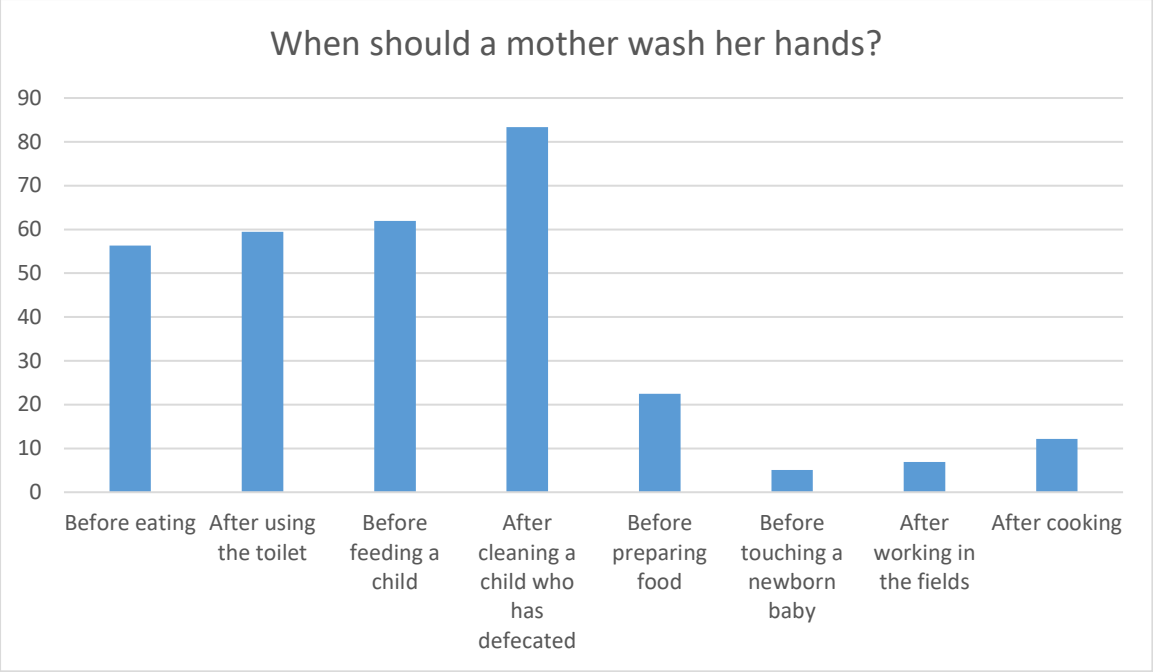

Figure 9.8 Knowledge of when a mother should wash her hands

Knowledge of what materials to use to wash hands was somewhat higher, with more than 85 percent of the sample reporting soap or water, and close to 4 percent reporting using ash. Despite this, 26.3 percent still reported that one can use soil to clean one's hands (Figure 9.9).

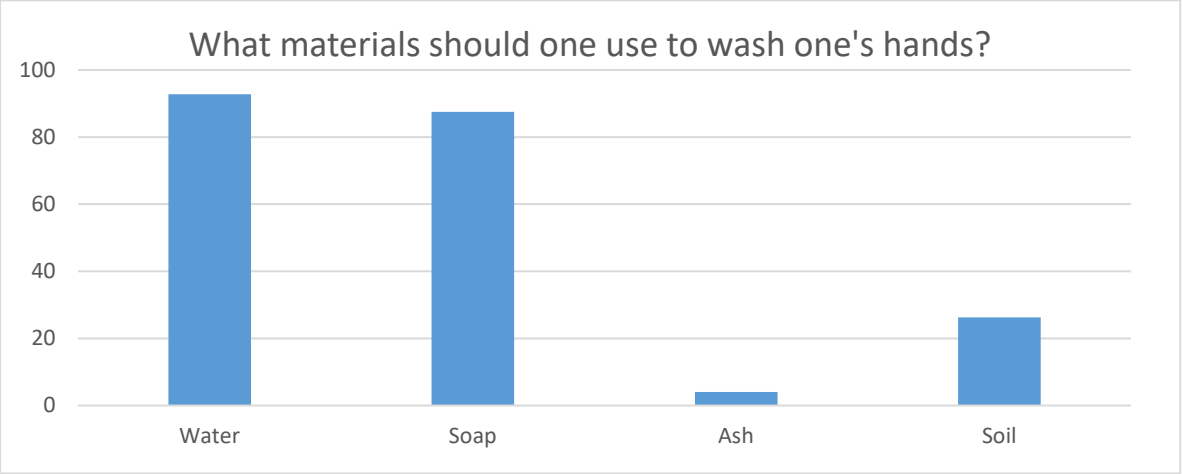

Figure 9.9 Knowledge of materials to wash one's hands

Close to 40 percent reported that government schemes were available as sources of money for toilet construction (Figure 9-10). However, no one specifically mentioned either the MGNREGA or the Nirmal Bharat Abhiyan as sources of money for toilet construction. A larger proportion of the households in treatment arm said the JEEViKA SHAN fund was a source of money for this than in control arm (13.3 vs 6.0), however this difference was not statistically significant.

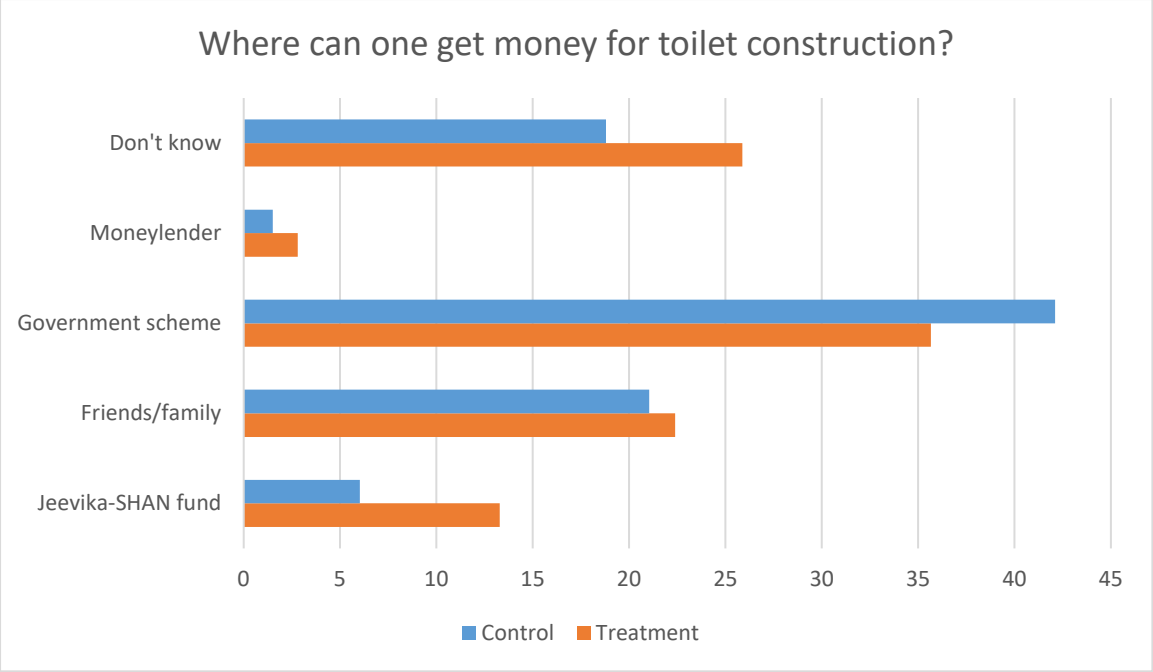

Figure 9.10 Knowledge of sources of money for toilet construction

Knowledge of care for the pregnant woman

An overwhelming majority of women said that a pregnant woman should have checkups at least 2-3 times during pregnancy (78.8 percent, Figure 9.11), but only 10.1 percent said that they should have the full 4 checkups that are recommended by the WHO. These proportions were not statistically different across arms, though a higher proportion in the treatment arm did give the response of 4 checkups (11.5 vs 8.7). Knowledge of services provided during an ANC visit was reasonable, with more than half the sample reporting tetanus injections, and about a third reporting provision of IFA tablets or syrup, weight gain monitoring, blood tests and urine tests (Table 9.3). When asked what vaccinations a pregnant woman should receive, however, only 37 percent reported tetanus.

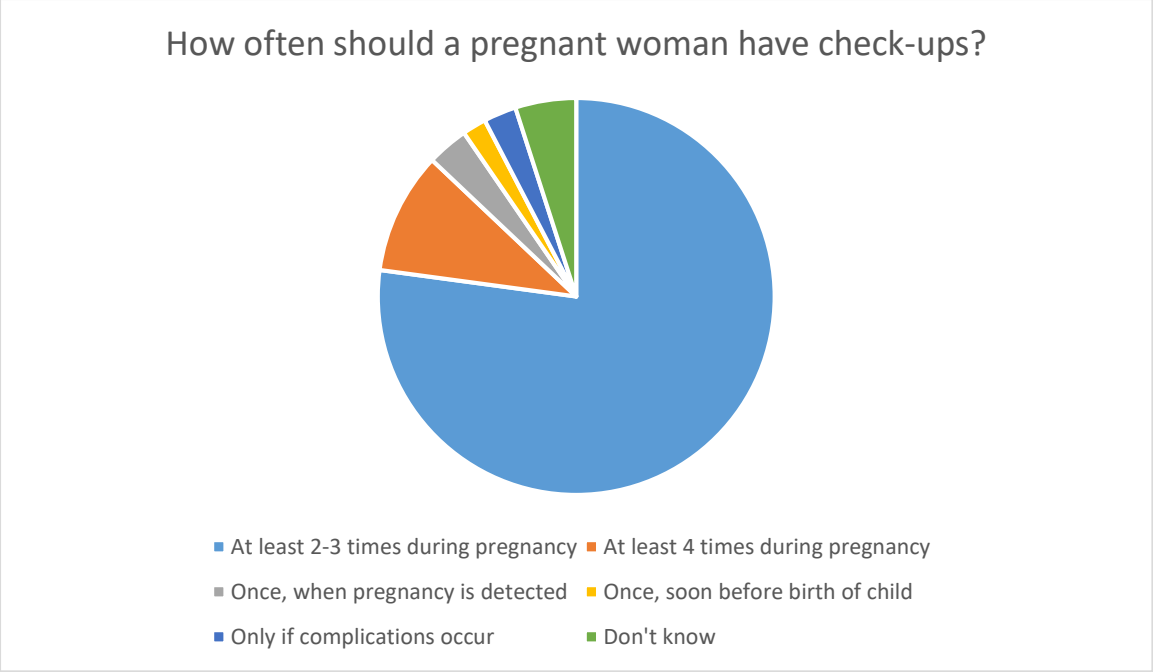

Figure 9.11 Knowledge of the number of ANC check-ups

Table 9.3: Knowledge of ANC services and vaccinations

	All (N=552)
	Proportion
What services are provided during an ANC visit?	
IFA tablets/syrup	36.96
Blood pressure checkup	9.96
Weight gain monitoring	32.79
Blood test	31.16
Urine test	30.98
Tetanus injections	54.89
Don't know	5.07
What vaccinations should a pregnant woman receive	
T.T injections	36.95
Don't know	62.65

Source: Authors' calculations.

Knowledge of nutrition during pregnancy

Distressingly, almost two thirds of the sample reported that a pregnant woman should eat *less* than normal (Table 9.4), and only about a quarter of the sample said that she should eat more than normal. Slightly less than a third of the sample reported that she should eat more fruits and vegetables and more milk, meat, eggs and fish. None of these proportions were significantly different across arms. The main reason cited for the need for proper nutrition for pregnant women was maintaining the health of herself and her child (90 percent), and adequate weight gain (40.8 percent). Other responses as listed in the table were reported in fewer than 10 percent of the cases.

Table 9.4: Knowledge of a pregnant woman's nutritional needs

	All (N=552)
	Proportion
How should the amount and composition of a pregnant woman's diet change	
Eat less than normal	62.9
Eat as much as normal, no change	6.0
Eat more than normal	25.9
More fruits and vegetables	31.5
More milk, meat, eggs and fish	32.1
Eat tri-colored foods	6.3
Don't know	1.8
Why is proper nutrition of pregnant women important?	
Maintaining the health of herself and her child	90.4
For adequate weight gain	40.8
For a brainy child with a bright future	2.0
Quicker recovery after delivery	8.0
Extra costs sure to doctors and medicine will be saved	0.7
Good investment in the future	4.2
Don't know	4.0

Source: Authors' calculations.

Knowledge of anemia

Around 72 percent of the sample said that paleness or pallor was a sign of anemia, followed by 63.8 percent who said less energy or weakness was a symptom (Figure 9.12). A significantly higher proportion of women in the control arm reported one symptom being spoon or bent nails (5.6 vs 3.1, $p<0.01$). A higher proportion of women in the treatment arm reported that anemic women were more likely to fall sick (2.1 vs 0.8) but this was not statistically significant.

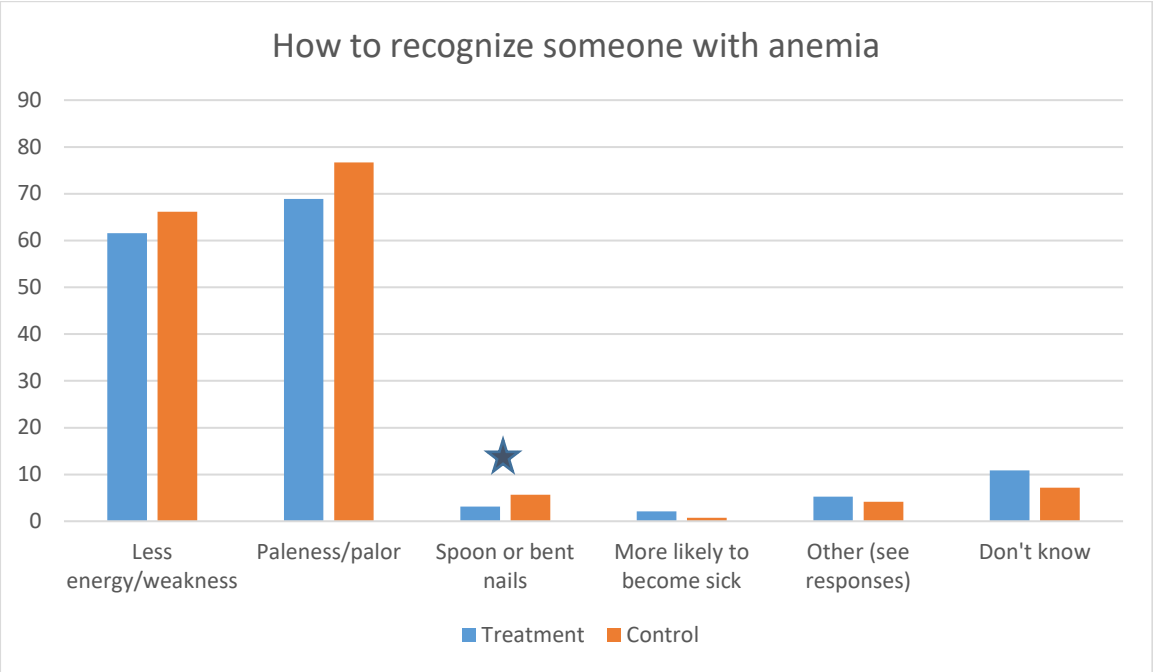

Figure 9.12 Knowledge of the signs of anemia

Reassuringly, close to 88 percent of the sample said that a cause of anemia was lack of iron in the diet. 12.5 percent also said sickness or infection could be a cause (Figure 9.13). Again, treatment and control arms were not statistically distinguishable from one another.

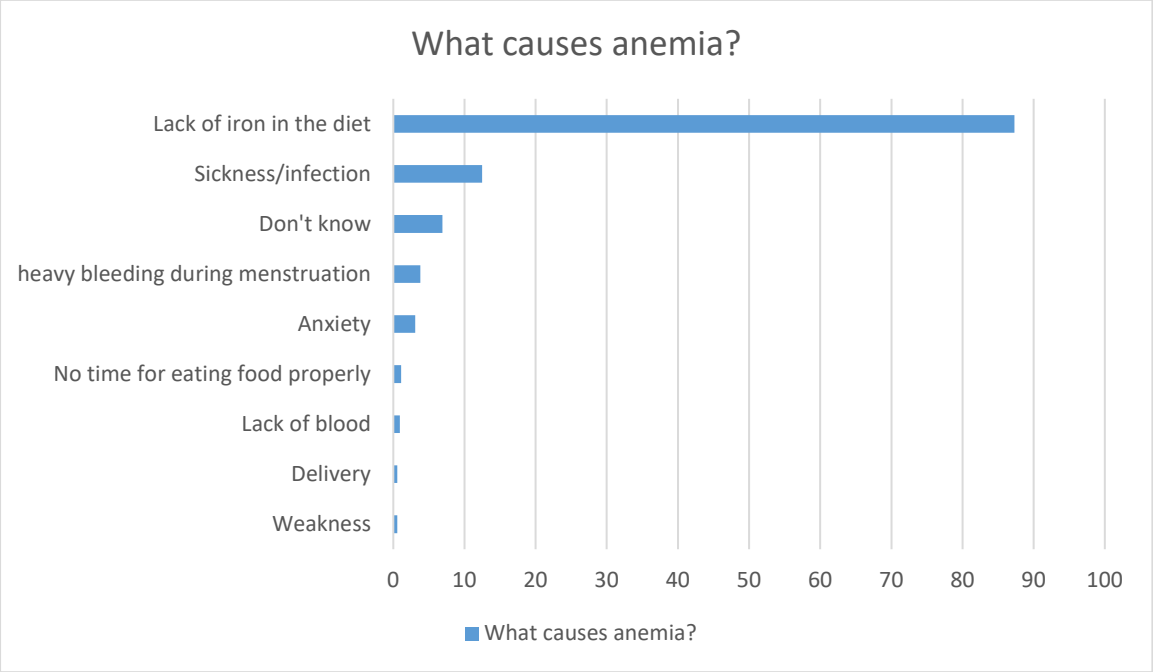

Figure 9.13 Knowledge of the causes of anemia

Finally, we asked women about consumption of IFA tablets, and where these could be purchased from (Table 9.5). Overall, respondents said that women should take (on average) 57.6 IFA tablets during pregnancy, which falls short of the actual prescribed 100 tablets, and that she should take around a tablet a day. The Anganwadi center was the main reported source of these tablets, as mentioned by more than 70 percent of the sample. Government frontline workers – the ANM and ASHA – were also mentioned by close to 20 percent of the sample. A significantly higher proportion of respondents in the treatment arm mentioned that these tablets could be purchased from pharmacies (10.5 versus 5.3, p<0.01).

Table 9.5: Knowledge of IFA tablets

	Treatment arm (N=286)	**Control arm (N=266)**	**All (N=552)**	**p-values**
	Mean (SD)/ Proportion	**Mean (SD)/ Proportion**	**Mean (SD)/ Proportion**	**T vs C**
How many IFA tablets should a pregnant woman take during pregnancy (mean)?	59.95 (49.29)	55.52 (40.73)	57.63 (45.01)	0.484
How many IFA tablets should a pregnant woman take in one day (mean)?	1.19 (0.4)	1.17 (0.4)	1.18 (0.4)	0.84
Where can one buy these IFA tablets?				
From ANM didi	14.0	26.7	20.1	0.195
Anganwadi center	69.2	73.7	71.4	0.48
Health centers	8.4	11.7	10.0	0.093
Pharmacy	10.5	5.3	8.0	0.01*
Hospital	17.1	14.7	15.9	0.178
ASHA	18.2	15.8	17.0	0.708
Don't know	6.6	4.9	5.8	0.393

Source: Authors' calculations.
Note: * indicates a p-value <0.05.

A large proportion – more than 45 percent – of the sample could not mention a single side effect associated with the consumption of IFA tablets, and 38 percent said there were no side effects at all. Less than 10 percent mentioned nausea, dizziness, abdominal discomfort or darkening of the stool (Figure 9.14). Again, none of these differences was statistically significant across arms.

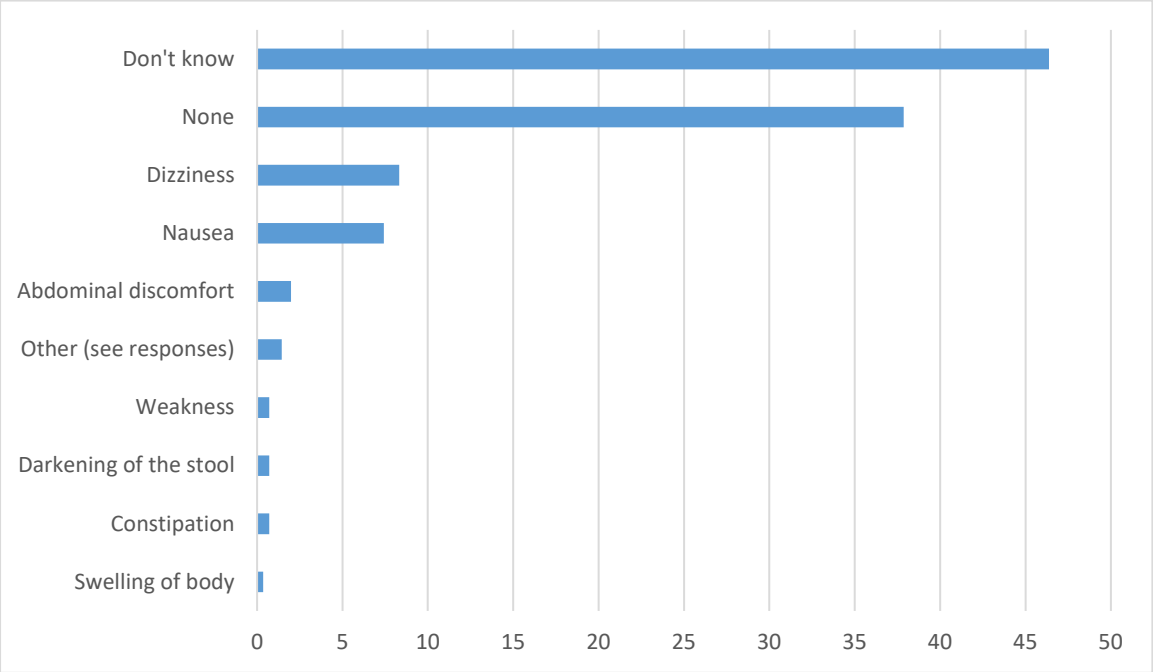

Figure 9.14 Knowledge of the side effects associated with consumption of IFA tablets

Knowledge of birth preparedness

More than 80 percent of the households said that when a woman is close to delivery, the family should prepare by keeping a clean cloth and blade ready (Figure 9.15). About 67 percent of the sample said that the family should have enough money saved to pay for medicines or delivery charges—this proportion as higher in control arm than in treatment arm (74.1 vs 60.5) but the difference was not statistically significant.

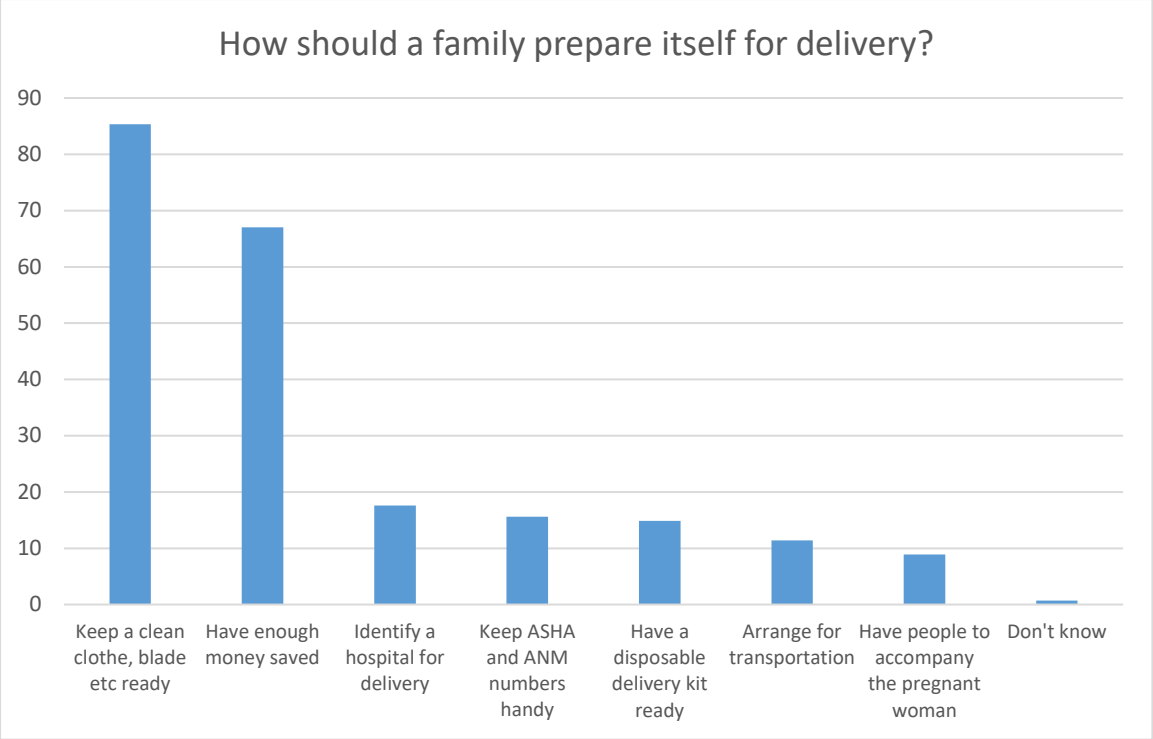

Figure 9.15 Knowledge of how a family should prepare itself for delivery

Knowledge of complications during pregnancy

We asked the respondents what a pregnant woman should do if she experienced vaginal bleeding, pain or burning sensation during urination, and other complications (Figure 9.16). The most common responses across different types of complications were to take her to the doctor, take her to the hospital or give her medicine. The patterns of responses were very similar across the two areas. The only significant difference was that a larger proportion of the control arm respondents said that the woman should be taken to the hospital if she experienced vaginal bleeding (43.6 vs 28, $p<0.05$), and a larger proportion of the treatment arm respondents said that she should rest if she experienced burning sensation or pain during urination (4.6 vs 1.5, $p<0.05$). We also asked about headache or blurred vision, fever and shortness of breath. The responses there were almost the same as what is shown here in Figure 9-16, and none of the responses were difference across treatment and control arm.

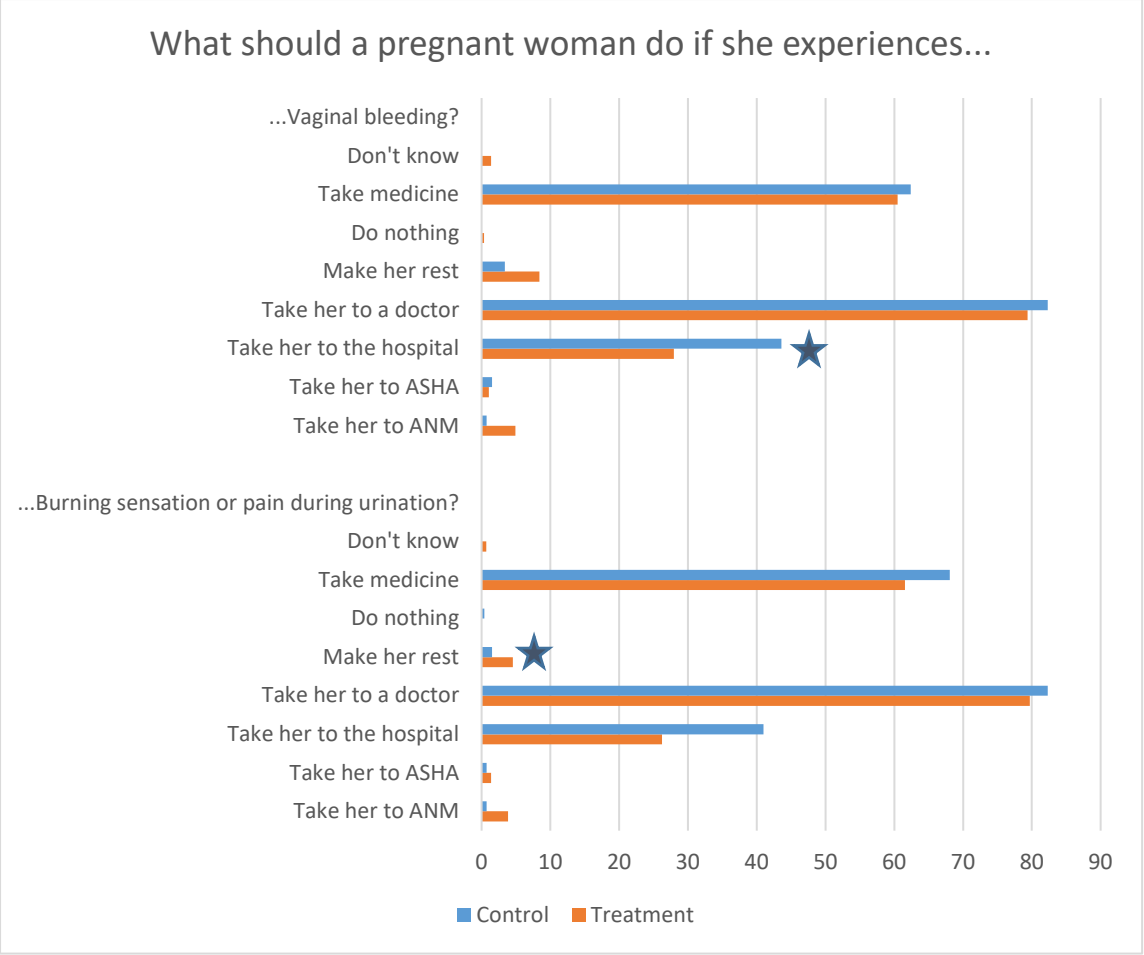

Figure 9.16 Knowledge of actions to take if complications arise during pregnancy

Knowledge of infant feeding

Knowledge of breastfeeding practices was quite high in this sample; however the levels of knowledge were uniform across the two arms. More than 75 percent of the mothers knew that the child should be fed colostrum, more than 80 percent knew that breastfeeding should be initiated within 1 hour after birth, and more than 95 percent knew about the need to exclusively breastfeed the child for the first six months (Table 9.6). These proportions were not significantly different across arms. On average, mothers reported that the child should be exclusively breastfed for slightly over 6 months. However, 88 percent of mothers still believe that a baby under 6 months of age can be given water if thirsty.

Table 9.6: Knowledge of IYCF practices

	Treatment arm (N=286) **Mean (SD)/ Proportion**	**Control arm (N=266) Mean (SD)/ Proportion**	**All (N=552) Mean (SD)/ Proportion**	**p-value T vs C**
Proportion who know about early initiation of breastfeeding	79.7	80.5	80.1	0.887
Proportion who know to feed child colostrum	78.0	72.6	75.4	0.239
Proportion who know about exclusive breastfeeding	94.4	96.2	95.3	0.506
Number of months for which the child should be exclusively breastfed	6.3 (2.0)	6.1 (1.4)	6.2 (1.7)	0.372
Proportion who think babies under 6 months can be given water	86.4	91.4	88.8	0.075

Source: Authors' calculations.

More than three fourths of the sample said that exclusive breastfeeding helps the baby grow better, and about 47 percent said that it protects the baby from illness (Figure 9.17).

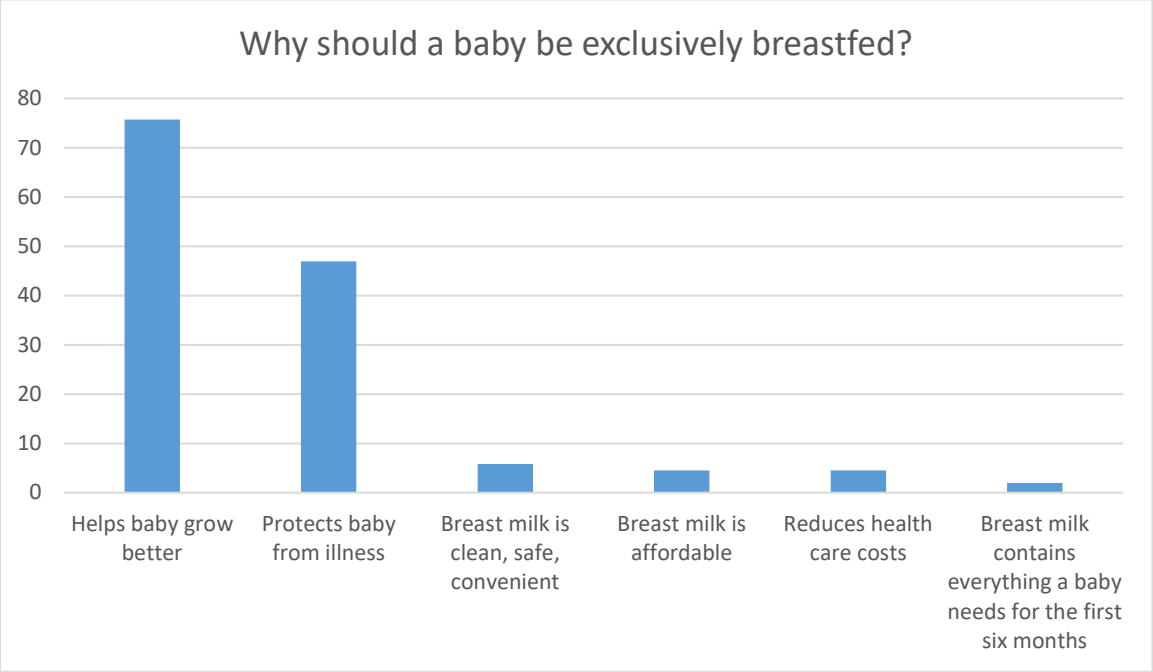

Figure 9.17 Knowledge of why a baby should be exclusively breastfed

Fifty-seven percent of the respondents incorrectly said that if a mother is unable to produce enough milk for her child then she needs to eat foods that increase milk production, another 48 percent said simply that the mother needs to eat more food (Figure 9.18). 14.7 percent incorrectly said that the baby should be given other liquids or foods to eat. The correct responses to this question were that the mother breastfeed more often, and that the mother drink more water. These correct responses were provided by less than 5 percent of the households. Again, both treatment and control arm were statistically indistinguishable from one another.

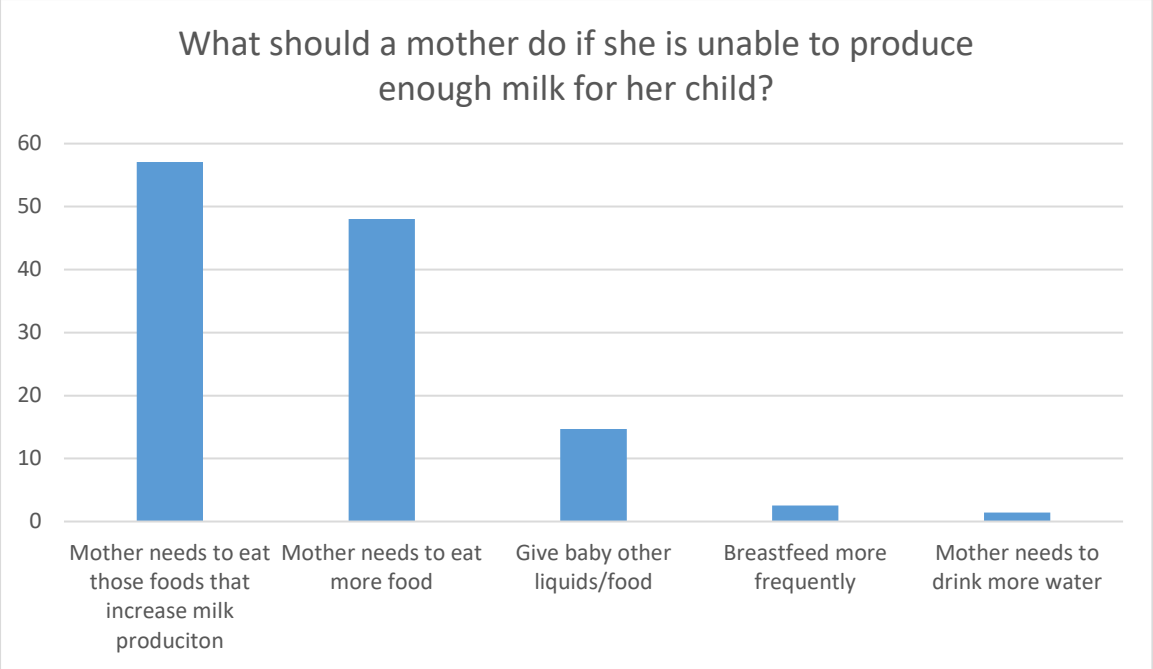

Figure 9.18 Knowledge of what to do if unable to produce enough milk

Finally, when asked what a baby should be fed if separated from its mother for any length of time, an overwhelming majority of respondents gave the incorrect response of cow's milk (Figure 9.19). About 13.6 percent of the respondents said packet milk.[4] The correct response of mother's expressed breastmilk was reported by less than 3 percent of the sample.

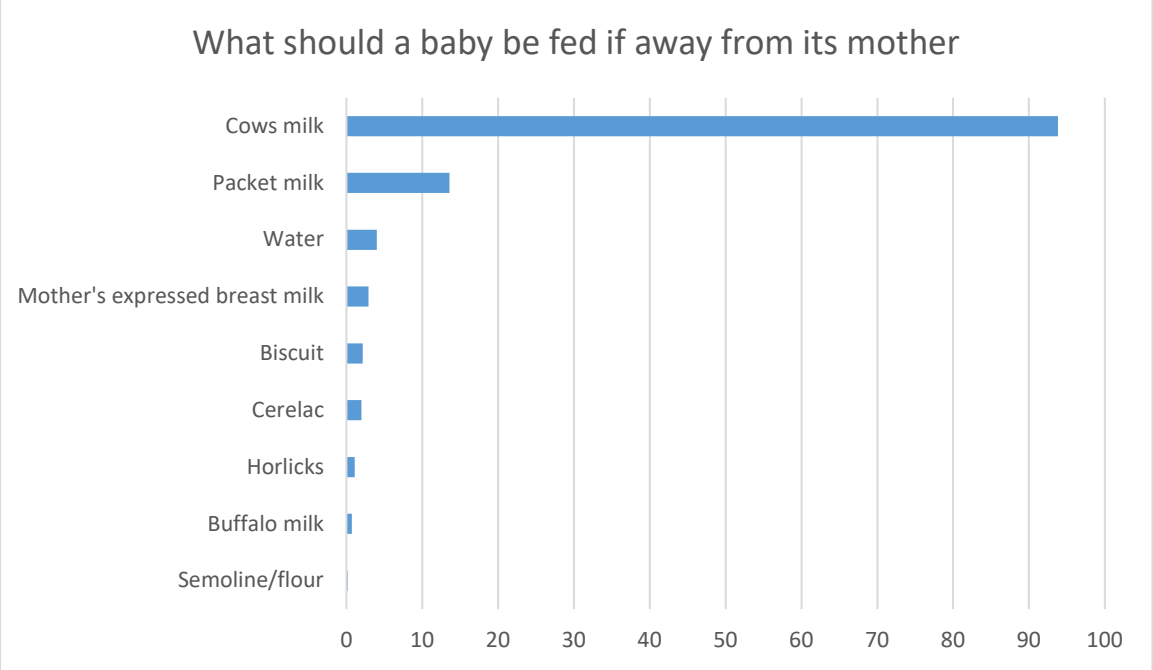

Figure 9.19 Knowledge of what to feed a baby if the mother isn't present

Knowledge of complementary feeding

We asked respondents to report the age at which it was appropriate to provide their children with a range of foods (Figure 9.20). The correct response in this case is between 6 and 8 months of age.

[4] Most packaged milk in India is buffalo milk.

Mothers reported that it was appropriate to give their infants water at (on average) 5 months, powdered or packet milk at 6.1 months, pulses and rice at slightly over 7 months, green leafy vegetables and vitamin A-rich vegetables at more than 9 months, and flesh foods at well past a year (more than 16 months). None of these differences was statistically significantly different across arms. These patterns in knowledge are very similar to what we observed in the baseline data as well. In particular, the incorrect belief that flesh foods cannot be given to children until they are older than a year seems to persist even in the treatment arm.

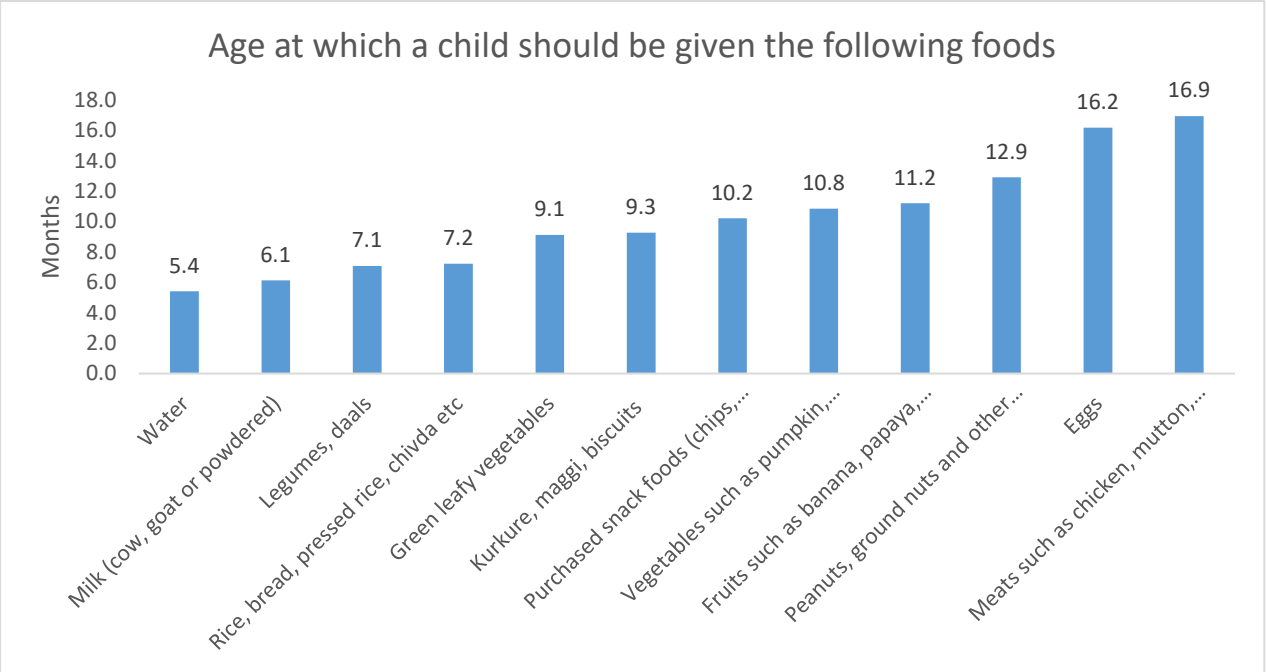

Figure 9.20 Knowledge of age at which foods should be introduced

Knowledge of immunization

The main disease against which mothers reported that immunization provided protection was polio, reported by 78 percent of respondents (Figure 9.21). Awareness of all other diseases was very low, with a sizeable proportion (17 percent) unable to name a single disease.

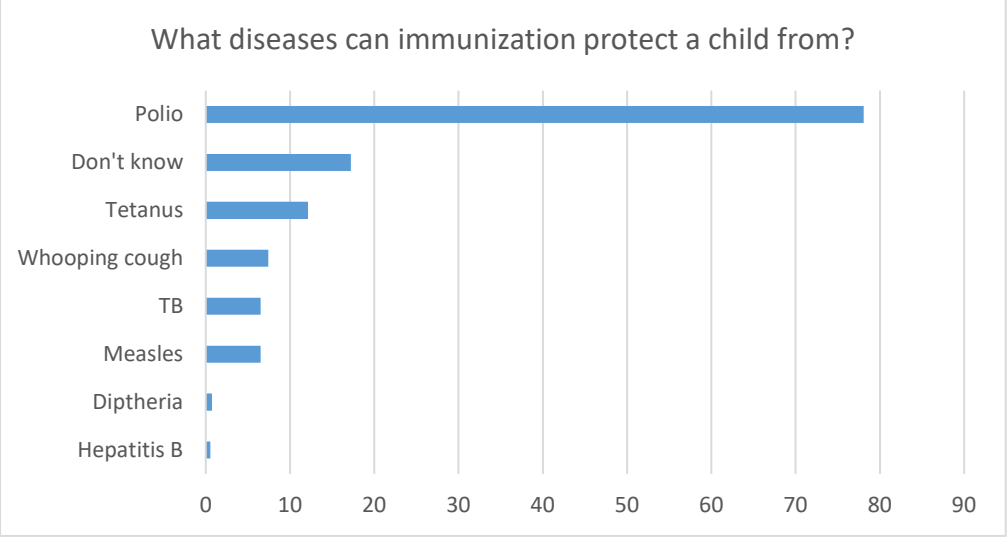

Figure 9.21 Knowledge of the diseases immunization provides protection from

Awareness of kitchen gardens

Of the total sample, close to 56 percent had ever had a kitchen garden, and this proportion was well balanced across treatment and control arm (Table 9.7). Of those individuals who had ever had a kitchen garden, a very large proportion of them (close to 96 percent overall) had kitchen gardens at present. On average, these individuals reported having a kitchen garden for about 21 months.

Table 9.7: Household awareness of kitchen gardens

	Treatment arm	Control arm	All	p-value
	Mean (SD)/ Proportion	Mean (SD)/ Proportion	Mean (SD)/ Proportion	T vs C
Proportion that have ever had a kitchen garden (N=192, 184, 376)	57.3	54.4	55.9	0.71
Proportion of those that *currently* have a kitchen garden (N=110, 100, 210)	95.5	96.0	95.7	0.91
Length of time that they have had a KG (in months) (105, 96, 201)	23.16 (25.03)	19.69 (28.36)	21.5 (26.66)	0.29

Source: Authors' calculations.

Awareness of community events and government schemes

Awareness of the community events was comparable across arms. Close to half of all the respondents – 49.8 percent - had heard about Annaprashan Diwas, and about 32 percent had heard of the Bachpan Diwas. There were no significant differences in awareness of community events across arms.

Awareness of government schemes targeted at mothers and young children was also high. When asked about the services provided at the AWCs, around 90 percent of the households reported the VHSND or Routine Immunization Day (the terms are used interchangeably in Bihar) and distribution of the Take home ration (THR) (Figure 9.22). More than 60 percent also reported pre-school education, followed by information about immunization (40 percent), growth monitoring (40 percent) and counseling on various topics (18 percent). None of the differences across arms was significant.

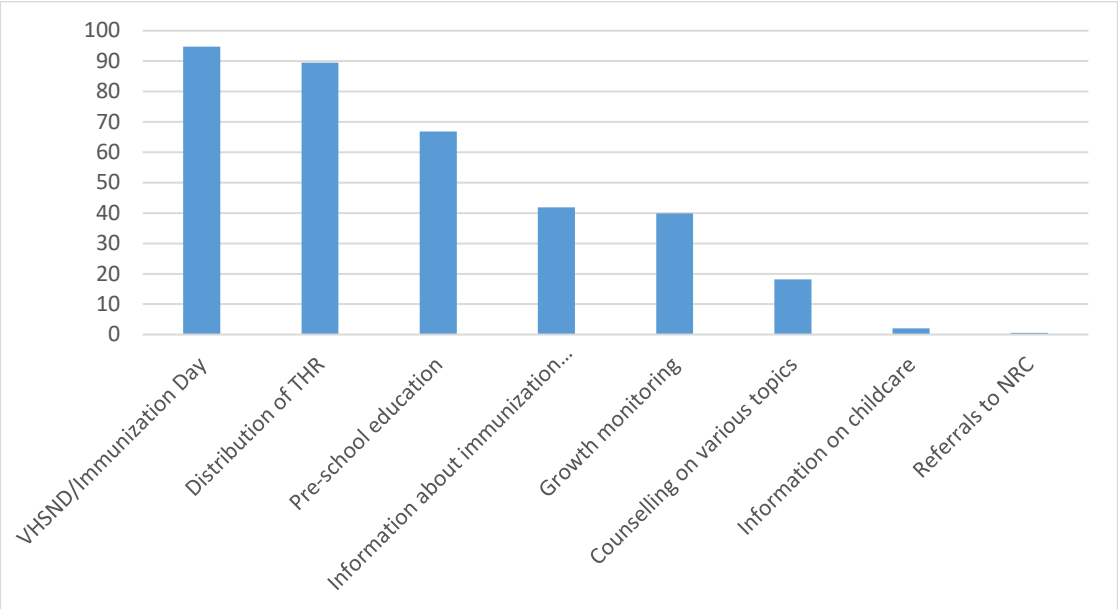

Figure 9.22 Knowledge of the services available from the AWC

Awareness of the Janani Suraksha Yojana (JSY) and the Janani Shishu Suraksha Karyakram (JSSK) was very high (Table 9.8). We should mention here that recognition of the names of these government schemes was low, but following the pilot testing and feedback received from the World Bank consultants, we asked the questions in the following way: "Have you heard of Janani Suraksha Yojana, or the scheme in which the family receives money on giving birth in the hospital?" and "Have you heard about Janani Shishu Suraksha Karyakram, or the ambulance/car number 102 scheme?" When asked in this fashion, 99.6 percent of the respondents reported having heard of the JSY, and 90.2 percent had heard of JSSK. Knowledge of the eligibility requirements was lower. 60.6 percent of the respondents reported that the JSY was available for women who gave birth in an institution, and 40.5 percent reported that it was meant for pregnant and lactating mothers. More than 98 percent reported that pregnant and lactating mothers were eligible for JSSK, and only 2.8 reported that women and children within 30 days of birth could avail of the benefits of this scheme.

Table 9.8: Household knowledge of JSY and JSSK

	All
Proportion who have heard of JSY	99.6
Who is eligible for JSY (N=550)	
All rural HHs	1.8
BPL HHs	0.7
Pregnant/lactating mothers	45.5
Women under age of 19	0
Women who deliver in an institution	60.6
Women with up to two births	0.2
Proportion who have heard of JSSK	90.2
Who is eligible for JSSK (N=498)	
All rural HHs	0.6
BPL HHs	2.4
Pregnant/lactating mothers	98.2
Women and children within 30 days of birth of child	2.8
Women under age of 19	0

Source: Authors' calculations.

Knowledge of the Health Risk Fund

In section 7, we discussed CM reports of the SHG members saving regularly toward the HRF. These are somewhat borne out by the households' own perceptions. Of the 376 SHG members in our sample who had heard of the HRF, 64 percent reported that they saved for this fund every month (Figures 9.23). However, 22.3 percent said they never saved for the HRF. These proportions were not significantly different across arms.

Households were also asked who they thought helped facilitate or approve the HRF loan-taking. Figure 9-24 presents their responses to the questions of "Who approves the request for an HRF loan?", "Who decides how much an SHG member can borrow?" and "Who decides the time period for repayment?". As can be seen, the large majority of households reported that the CM played a role in all three of these processes. This was followed by the response of SHG members. A very small proportion of households mentioned that either VO members or the VO executive committee played a role in determining any of these aspects. The only significant difference across arms is in the proportion of households that report that the CM decides the time period for repayment, which is higher in the treatment arm (62.5 vs 49.5, $p<0.05$).

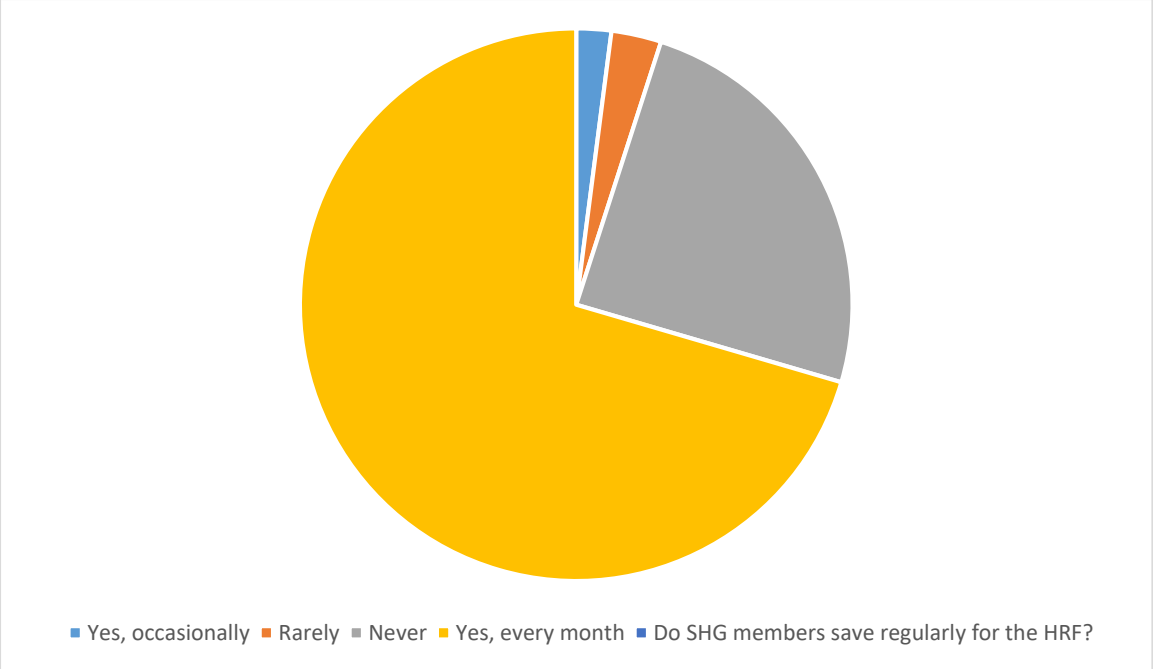

Figure 9.23 Household perceptions of saving for the HRF

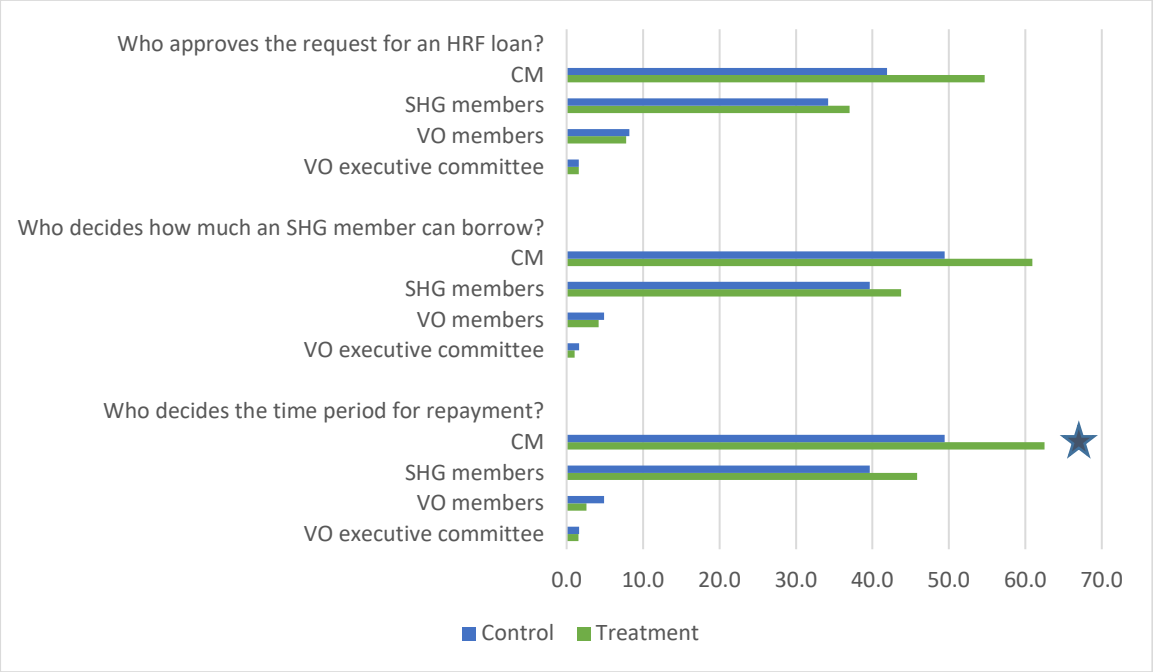

Figure 9.24 Household perceptions of the HRF loan-taking process

Knowledge of the Food Security Fund

Overall, 81.6 percent of the households had heard of the FSF, and these proportions were not significantly different across arms. As can be seen from Figure 9.25, the majority of households believed that the CM both approved the request for the FSF as well as decided the time of repayment of the loan. The next most frequent response was that of SHG members. VO members were only reported in less than 10 percent of the cases. A negligible proportion of the households mentioned that the VO committees – the Procurement and FSC – had any role to play in approving the request for the FSF. The only difference across arms was that households in the treatment arm were significantly more likely to mention the CM as having a role to play in approving the request for the FSF than households in control arm (69.8 vs 56.1, $p<0.05$).

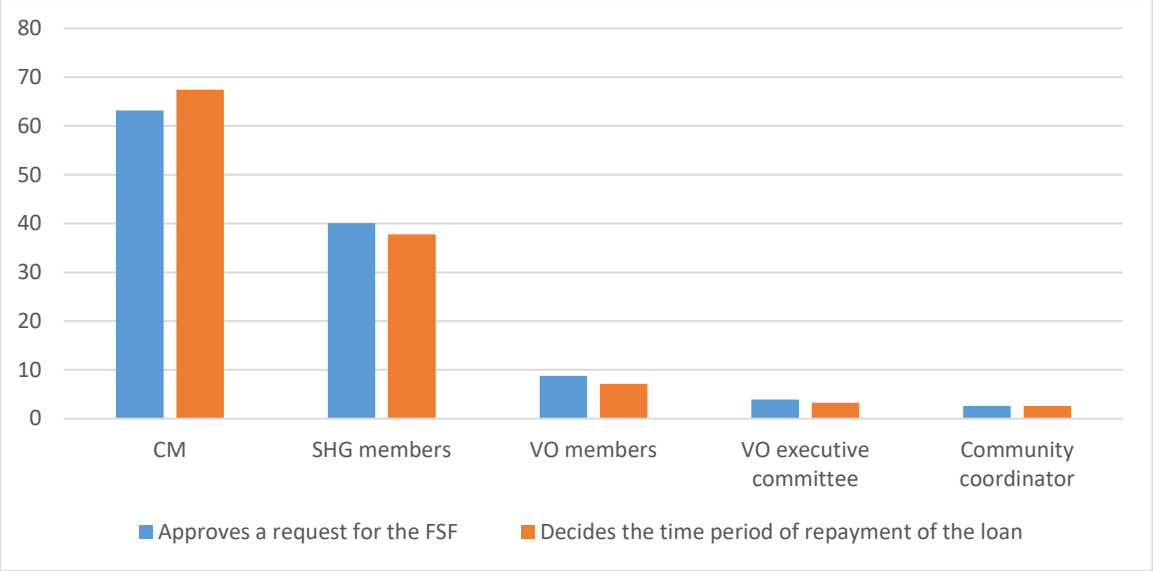

Figure 9.25 Household perception of the roles of various actors in facilitating the FSF

In addition, households were also asked who played a role in the procurement and distribution of the grains that were bought using the FSF (Figure 9.26). Both the treatment and control arm responses have been pooled here. We see that a large proportion of households think that the CM is responsible for procurement and distribution of the food grains. This is followed by the VO executive committee, the SHG members and the FSC. Fewer than 2 percent of households report that the PC plays a role. A significantly higher proportion of households in the control arm reported that the Bookkeeper played a role in procurement and distribution (4.7 vs 1.3, $p<0.05$). Otherwise there were no significant differences across arms.

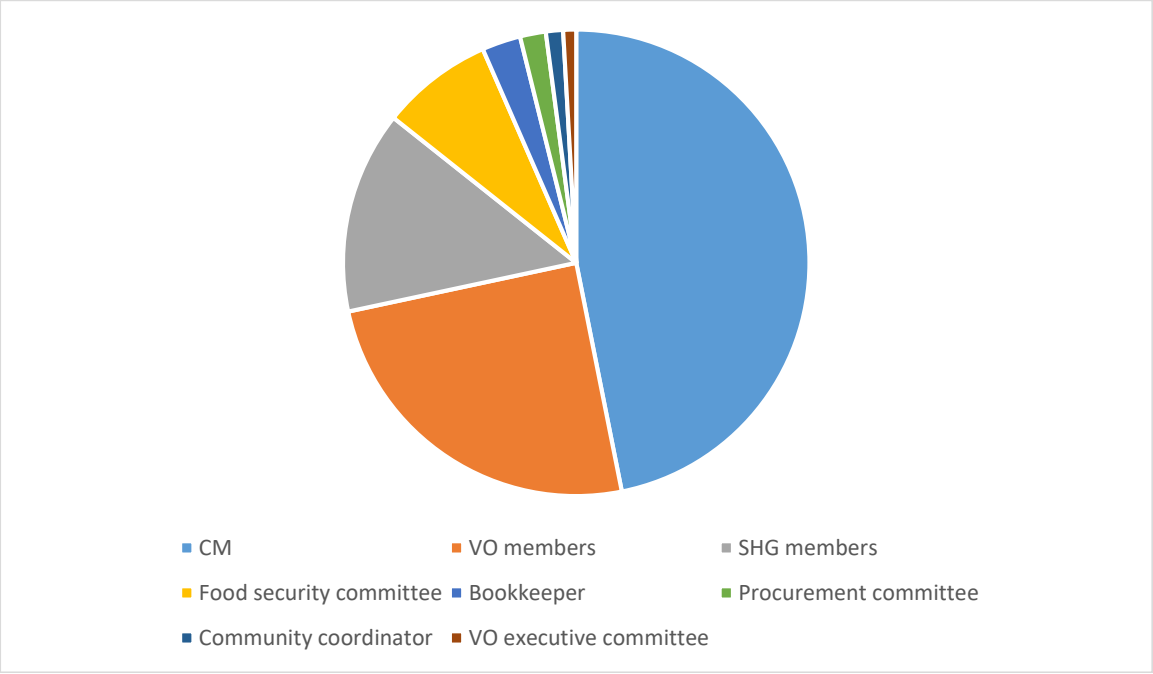

Figure 9.26 Household perception of the role of various actors in procurement and distribution

How CMs' and HHs' knowledge maps to the modular training –

The CMs and HHs were only asked questions pertaining to those modules of the BCC that had been rolled out at the time of the PE. The same questions were asked across the treatment and control arm to

assess any differences in knowledge due to the intervention. The knowledge of the CMs and HHs match well in terms of the topics on which both have performed well or poorly.

Areas where both the HHs and CMs have performed well include knowledge of different foods and the purposes they serve (for example, in providing body energy, helping the body grow, protecting one from illness, and making bones stronger) and in knowledge of sources of vitamin A. The awareness of instances where mother or caregiver should wash hands is also good. In case of breastfeeding practices, both households and CM demonstrate high levels of awareness. The majority of them know of the need for exclusive breastfeeding and the age until which a child should be exclusively breastfed.

Areas in which the HHs and CMs have uniformly performed poorly include ANC and immunization. The majority of households reported that a pregnant woman should eat less than normal, and less than half the CMs said that a lactating woman should eat more than a non-pregnant woman. Awareness of the recommended number of ANC check-ups is still low and knowledge of services provided under ANC is poor for both households and CMs. Less than half the CMs identified tetanus injections as necessary vaccinations for pregnant women. Apart from polio, awareness of diseases the child can be protected from through immunization was also low. The awareness of disposal of young child's stools was also discouraging among both households and CMs.

In addition, households have limited knowledge of the number of IFA tablets which should be consumed during pregnancy and the timely introduction of different food groups in the diet of an infant.

What is evident is that topics recently covered in the BCC training are still fresh in the minds of the CMs and households, and that the topics covered early on at the beginning of the pilot have not been well retained. For example, the care of a pregnant woman and the ANC services she is entitled to were covered earlier, and are the topics the respondents have not responded correctly to. On the other hand, topics on different food groups and their uses and feeding practices of infants were the last two modules before the PE was conducted, and we see better results in knowledge for those topics.

Box 9.1: Comparing Households' health and nutrition knowledge across baseline and PE

Since the households surveyed in the PE were also surveyed in the baseline, their responses to questions on health and nutrition awareness were compared between both rounds of data collection. In the process evaluation, the surveyed women were only asked questions on health and nutrition which were related to the BCC modules that had already been covered. We refer the reader to Table A.5 in Appendix for the full set of comparisons of household knowledge. Below we list in brief the areas where we see an improvement or a deterioration in knowledge.

Improvement in knowledge from baseline to PE -

- Fewer respondents (across arms) said that mother should stop feeding child under 6 months if she is pregnant.
- More respondents in both the arms were aware that the baby grows better if exclusively breastfed.
- There was improvement in knowledge of instances where it is necessary to wash hands (across arms).
- Knowledge on the causes of anemia has improved in both the arms.

Deterioration in knowledge form baseline to PE -

- In case of introduction of vegetables, meat, chicken, fish and eggs in the diet of infants; the households' knowledge (across arms) has declined as the average age for introduction of these food items increased beyond the recommended window of 6-8 months.
- The proportion of respondents who knew about early initiation of breastfeeding has declined in the treatment arm.
- In both arms, fewer respondents gave the correct answer when asked what should a mother do if her child is not getting enough breast milk.
- Fewer respondents (in both arms) were aware that exclusive breastfeeding protects child from illness.
- A larger proportion of respondents (across arms) said that a pregnant woman should eat less than a non-pregnant woman.
- A substantially smaller proportion of respondents knew how many IFA tablets should be taken by a pregnant woman (in both treatment and control arms).

Overall: As can be seen from Table A.5 and from the summary above, where there is improvement in knowledge, it seems to be happening in both arms, rather than just in the treatment arm as would be expected as a result of the BCC intervention component. This implies either that the BCC component of the intervention is not effectively delivered, or that there is contamination of the control group, who are receiving the same messages from elsewhere.

Summary

SHGs and VOs

- About 68% of the women interviewed as part of the household survey were part of an SHG. This proportion did not differ across treatment and control arms. Individuals in the control arm

had, on average, been part of the SHG for slightly longer. 98 percent of the respondents reported that their SHG had savings and credit activities.

- Among the women who were not members of an SHG, the main reason cited for not being a member was that another household member was already active or that they were not interested.
- Only about a fifth of the respondents were portfolio holders at the time of the survey and about 50 percent attended VO meetings twice a month. Among those who attended the VO meetings less frequently than twice a month, the main reason for not attending was lack of information about when the meetings were held- which was more likely to be reported in the treatment arm.
- Awareness of JEEViKA was low, 58 percent of the respondents said that they did not know which organization was supporting their SHG. Only 18 percent responded that JEEViKA was providing their SHG with support – this proportion was higher in treatment arms than in control arms but the difference was not statistically significant.

Exposure to information

- More than 95 percent of the respondents reported discussing savings and credit in their SHG meetings. WASH was reported as being discussed by about 60% of the respondents.
- A significantly greater proportion of women in the treatment arms reported discussing community events like the Annaprashan and Bachpan Diwas. A higher proportion of treatment arm respondents also reported discussing a range of nutrition topics such as ANC, complication readiness during pregnancy, birth preparedness, care of the newborn, post-partum complications in mother and newborn, and the importance of dietary diversity, but because of small sample sizes none of these differences were significant.
- The proportions of women who reported discussing *poshak badi* cultivation, different ways of achieving food security, use of the FSF, use of HRF for healthcare, government schemes and breastfeeding practices was comparable across the treatment and control arms and ranged between being reported by 30-50% of the respondents.

Knowledge of H&N, loans, and services available through SHGs, VOs, and government

- A large fraction of households could identify that that grains provide the body with energy, with a significantly higher proportion in the treatment arms reporting this than in the control arms.
- The main responses to food that helps the body grow and repair was all pulses, milk and curd. Meat and fish were both reported by less than a fifth of the households.
- Among the foods that protect the body from illness, green leafy vegetables and fruits were mentioned.
- Milk and milk products and green leafy vegetables were reported to make bones stronger.
- Knowledge about sources of iron was mixed, where almost 65 percent of households incorrectly identified milk as a source but at same time close to 60 percent said that green leafy vegetables were good sources of iron.
- About two-thirds of households, reported that orange colored fruits or vegetables were good sources of vitamin A, and about a third also mentioned green leafy vegetables as source.
- The main reason cited for keeping surroundings clean was that it helped keep people healthy and prevented them from falling sick.
- However, the main response of how to dispose of child stools was to leave them in the open.

- Knowledge about when to wash hands was also very varied, with 83 percent of the respondents who said that mothers should wash their hands after cleaning a child who has defecated but only 59.4 percent said after using the toilet.
- Knowledge of what materials to use to wash hands was somewhat higher, with more than 85 percent of the sample reporting soap and water.
- There was awareness about availability of funds for toilet construction through government schemes. However, no one mentioned either the MGNREGA or the Nirmal Bharat Abhiyan as one of these schemes.
- An overwhelming majority of women said that a pregnant woman should have checkups at least 2-3 times during pregnancy, but only 10.1 percent said that they should have the full 4 checkups that are recommended by the WHO. These proportions were not statistically different across arms. Knowledge of services provided during an ANC visit was reasonable, with more than half the sample reporting tetanus injections, and about a third reporting provision of IFA tablets or syrup, weight gain monitoring, blood tests and urine tests.
- Distressingly, almost two thirds of the sample reported that a pregnant woman should eat *less* than normal, and only about a quarter of the sample said that she should eat more than normal. Although about a third of the sample reported that she should eat more fruits and vegetables and more milk, meat, eggs and fish. None of these proportions were significantly different across arms.
- A large fraction of women could identify that a cause of anemia was lack of iron in the diets and knew the common symptoms of anemia.
- Respondents said that women should take (on average) 57.6 IFA tablets during pregnancy, which falls short of the actual prescribed 100 tablets, and that she should take around a tablet a day. The Anganwadi center was the main reported source of these tablets. Government frontline workers – the ANM and ASHA – were also mentioned as source.
- There is positive evidence on birth-preparedness. More than 80 percent of the households said that when a woman is close to delivery, the family should prepare by keeping a clean cloth, blade etc ready. About 67 percent of the sample said that the family should have enough money saved to pay for medicines or delivery charges.
- When asked about what a pregnant woman should do if she experienced vaginal bleeding, pain or burning sensation during urination, and other complications, the most common responses across different types of complications were to take her to the doctor, take her to the hospital or give her medicine. The patterns of responses were very similar across the two areas.
- Knowledge of breastfeeding practices were quite high in this sample. More than 75 percent of the mothers knew that the child should be fed colostrum, more than 80 percent knew that breastfeeding should be initiated within 1 hour after birth, and more than 95 percent knew about the need to exclusively breastfeed the child for the first six months. These proportions were not significantly different across arms.
- A large percentage of women could identify benefits of exclusive breastfeeding and how a mother that is unable to produce enough milk can increase milk production. The most commonly mentioned benefit was that it helps the baby grow better.
- The respondents' knowledge of appropriate age of introducing complementary foods is quite poor, especially with regard to introducing flesh foods.
- When certain responses on awareness of health and nutrition of the same respondents were compared between Baseline and PE, improvement was noticed in reasons for exclusive

breastfeeding, instances when hands should be washed and causes of anemia. But knowledge on feeding has deteriorated such as- awareness of timely introduction of vegetables, meat, chicken, fish and eggs in the diets of infants has declined. There has also been a drop in awareness on how a pregnant woman should change her diet and the number of IFA tablets she should consume.

- The main disease against which mothers reported that immunization provided protection was polio, reported by 78 percent of respondents. Awareness of all other diseases was very low.
- Of the total sample, close to 56 percent had ever had a kitchen garden, and this proportion was well balanced across treatment and control arms. Of those individuals who had ever had a kitchen garden, a very large proportion of them had kitchen gardens at present and have had them for an average of about 21 months.
- Awareness of the community events was comparable across arms. Close to half of all the respondents had heard about Annaprashan Diwas, and about 32 percent had heard of the Bachpan Diwas.
- Awareness of government schemes targeted at mothers and young children was also high. When asked about the services provided at the AWCs, a large proportion of the women could accurately identify these services such as – the VHSND or Routine Immunization Day, distribution of the Take home ration, pre-school education, information about immunization, growth monitoring and counseling on various topics.
- Awareness of the Janani Suraksha Yojana (JSY) and the Janani Shishu Suraksha Karyakram (JSSK) was very high. Knowledge of the eligibility requirements was lower.
- A large majority of households reported that the CM played a role in taking all the major decisions around the HRF. This was followed by the response of SHG members taking the decisions. A very small proportion of households mentioned that either VO members or the VO executive committee played a role in determining any of these aspects.
- Understanding among households of the FSF is mixed. Majority of the households believed that the CM both approved the request for the FSF as well as decided the time of repayment of the loan. A negligible proportion of the households mentioned that the VO committees – the Procurement and FSC – had any role to play in approving the request for the FSF.

10. RESULTS: Utilization

In this section, we present results on whether women are trying and adopting nutrition and health messages delivered through the intervention. We also examine the different factors that influence these decisions and practices.

10.1 Nutritional practices

Among the nutrition and health messages delivered were messages around diverse diets and handwashing. We asked women if they had heard of a number of messages, if they had ever adopted the practice being advocated in the message, and if not, why not. The first of these messages is that all household members should eat tri-colored foods. As reported in Table 10.1, we find that a larger fraction of women had heard of this message in the treatment group as compared to the women in the control group (38% vs 21%, p=0.05), though this difference is not statistically significant at 5%. Among those that had heard of this message nearly all of them had tried it, irrespective of arm.

We find that knowledge of the second message – that children under 2 should eat tri-colored food - is not very high, though a significantly higher percentage of the treatment arm mothers have heard this message (34.6 percent vs 19.1 percent, p<0.05). Among those who had heard of this message all mothers have tried it in the treatment group and almost all (98%) have tried it in the control group.

Finally, a much larger fraction of households have heard about handwashing before preparing food, before feeding children and after defecation (~97% in both arms) and all report having tried it at home.

Table 10.1 Exposure to and adoption of nutrition messages and handwashing messages

	Treatment arm (N=286)	**Control arm (N=266)**	**All (=552)**	**p-values**
	Proportion	**Proportion**	**Proportion**	**T vs C**
All members of the household should eat tri-colored food				
Proportion who have heard this message	38.11	20.68	29.71	0.05
Proportion who have tried this at home (N=109, 55, 164)	99.08	100	99.39	0.223
Children under the age of 2 should eat tri-colored food				
Proportion who have heard this message	34.62	19.17	27.17	0.021*
Proportion who have tried this at home (N=99, 51, 150)	100	98.04	99.33	0.29
Family members should wash their hands before preparing food, before feeding the child and after defecation				
Proportion who have heard this message	96.85	97.37	97.1	0.791
Proportion who have tried this at home (N=277, 259, 536)	100	100	100	-

Source: Authors' calculations.
Notes: * indicates a p-value <0.05.

More than 30 percent of the women report having heard the messages on diet at the AWC and 19-23 percent report having heard them at the SHG meeting (Figure 10.1). Other common sources are family members, AWW, ASHA and the CM. About 23 percent of the women report having heard the handwashing message from family members and 18-19 percent report having heard it from SHG meeting, AWC or the ASHA. There were no significant differences between source of exposure to the

message across the two arms baring a few exceptions.[5] None of the women reported that they heard any of these messages at the Bachpan Diwas, Annaprashan Diwas, the VHSND, or from a doctor.

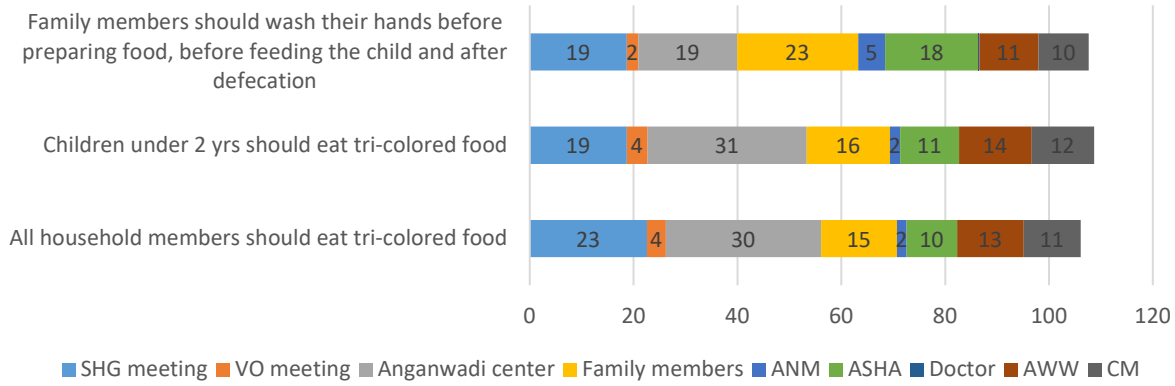

Figure 10.1: Sources of exposure to messages

About 96 percent of women reported that adults in their households always wash hands after using the toilet, however, only 63 percent reported that adults wash hands after handling fecal matter (Figure 10.2). In fact, 36 percent of the women reported that adults in their household never wash their hands after handling fecal matter. A larger fraction reported that adults in their household wash their hands before cooking food (72%), eating food (81) whereas handwashing before feeding the child is not very high (47%).

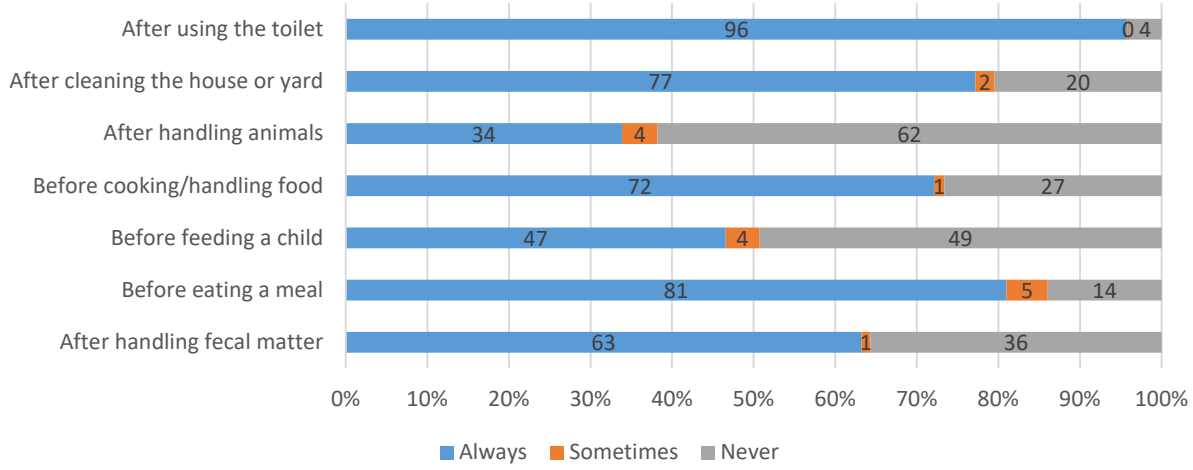

Figure 10.2: Handwashing among adults in the household

10.2 Use of SHG and VO loans and services

In this subsection, we present details on utilization of various services available through the SHG and VO, including credit and savings services that are directly available through membership in these groups, loans available through the Health Risk Fund (HRF), services available through the Food

[5] There is a significant difference in the percentage of women that heard that all member and children under 2 years should eat tri-colored food from the ASHA (6% and 8% in treatment group as compared to 16% and 18% in control group, $p<0.05$). For the hand-washing messages, women in the treatment group were less likely to have heard this from the ANM as compared to the women in the control group (3% vs 7%, $p<0.05$) and women in the treatment group were more likely than those in the control group to have heard this from the CM (13% vs 6%, $p<0.05$).

Security Fund (FSF), training and inputs for kitchen gardens. In addition to utilization, we will also explore factors that may have facilitated the use of these services and factors that may have served as barriers.

10.2.1 SHG loans

Roughly two-thirds of the women in the sample have received a loan from their SHG with an average amount borrowed ranging between INR 6744-7330 (Table 10.2). These patterns are similar across the treatment and control arms. When asked how this loan was used, about half of the respondent women reported using it for medical expenses. Home construction/maintenance and other consumption needs were identified as other uses of this loan. Over 90 percent of the women who report receiving the loan also report receiving assistance in deciding what to do with the loan. This assistance is provided by SHG members, CM and family and friends.

Table 10.2 Loans received from SHGs

	Treatment arm (N=192)	**Control arm (N=184)**	**All (N=376)**	**p-values**
	Mean (SD)/ Proportion	**Mean (SD)/ Proportion**	**Mean (SD)/ Proportion**	**T vs C**
Proportion who have received a loan from their SHG	77.6	73.91	75.8	0.536
Amount of the last loan (in INR)	7330.9 (6271.2)	6744.8 (5640.6)	7051.2 (5975.4)	0.442
Last loan was used for (N=149, 136, 285)				
Own of family's consumption needs	12.08	17.65	14.74	0.261
Expenses related to ceremonies/festivals	3.36	8.82	5.96	0.057
Repaying another loan	0	1.47	0.7	0.072
Investment in non-agriculture-specific capital equipment	4.7	9.56	7.02	0.126
Daughter's wedding	3.36	0.74	2.11	0.05
Consumer durables	0	0.74	0.35	0.287
Home construction/maintenance	16.78	14.71	15.79	0.609
Medical expenses	53.69	49.26	51.58	0.637
Investment in agricultural equipment	2.01	1.47	1.75	0.737
Received assistance in deciding what to use loan for (N=149, 136, 285)	93.96	91.18	92.63	0.396
Who gave assistance (N=140, 124, 264)				
SHG members	41.43	55.65	48.11	0.092
CM	42.14	41.13	41.67	0.912
Friends/family	44.29	38.71	41.67	0.39

Source: Authors' calculations.

10.2.2 Health Risk Fund

Table 10.3 provides information on use of the HRF and reasons for not using it. A relatively smaller fraction of women report taking a loan from the VO's HRF as compared to borrowing from the SHG directly. For example, about 13.5 percent women reported having borrowed from the HRF in the treatment arm and 11 percent in the control arm.

When asked why they did not borrow from the HRF, the two primary reasons cited are that they did not have a health emergency and had enough money to cover shocks. This is somewhat contrary to the results on use of loans taken from SHGs- where over half of the women report using it for medical expenses. Also, important to note is that about 16 percent and 19 percent women were denied the loan and did not know about the HRF, respectively. Reports of the loan request being denied is slightly higher in the treatment group as compared to the control group (19% vs 13%), but this difference is not statistically significant.

Table 10.3 Use of Health Risk Fund

	Treatment arm (N=192)	**Control arm (N=184)**	**All (N=376)**	**p-values**
	Proportion	**Proportion**	**Proportion**	**T vs C**
Proportion that have ever taken a loan from the VO's HRF	13.54	10.87	12.23	0.735
Reasons for not taking a loan (N=166, 164, 330)				
Did not have a health emergency	22.29	28.66	25.45	0.45
Had enough money to cover costs	29.52	25	27.27	0.192
Borrowed from friends/family	2.41	1.83	2.12	0.446
Borrowed from moneylender	1.2	0.61	0.91	0.624
My request was denied	19.28	12.8	16.06	0.198
Don't know about HRF	19.28	18.9	19.09	0.957

Source: Authors' calculations.

About 21 percent of the women in the treatment arm requested a loan from HRF but were denied (Table 10.4). This percentage is slightly lower (17 percent) in the control arm, but the difference is not statistically significant. The primary reason for this denial was cited as there being not enough money in the HRF, a response that was significantly more prevalent in the treatment arm (75% vs 64%, $p<0.05$). We also asked women if they knew of someone else in their SHG who had requested a loan from the HRF and was denied. Only 7 percent of the women reported knowing of any such instance and the reasons cited for such denial were not getting approval from either the SHG members or the VO members. They also noted that the process of acquiring the loan is time consuming.

Table 10.4 Denial of request for loans from the HRF

	Treatment arm N=192	**Control arm N=184**	**All N=376**	**p-values**
	Proportion	**Proportion**	**Proportion**	**T vs C**
Proportion who have ever requested a loan from HRF and been denied	20.83	17.39	19.15	0.256
Reason for denial of the loan (N=40,32,72)				
Not enough money in the HRF	75	50	63.89	0.029
Someone needier was given the loan	5	9.38	6.94	0.072
Did not follow the correct procedure	0	3.13	1.39	0.351
SHG members did not approve request	5	6.25	5.56	0.788
VO exec members did not approve request	5	12.5	8.33	0.533
Previous loan had not been repaid	10	15.63	12.5	0.312
Proportion where someone from SHG has requested a loan and been denied	6.25	7.07	6.65	0.608
Reasons for denial of this loan (N=12,13,25)				

	Treatment arm N=192	Control arm N=184	All N=376	p-values
	Proportion	**Proportion**	**Proportion**	**T vs C**
SHG members did not approve request	33.33	15.38	24	0.35
VO exec members did not approve request	41.67	23.08	32	0.34
Process of acquiring loan is time consuming	8.33	15.38	12	0.676

Source: Authors' calculations.

10.2.3 Food Security Fund

Women in the treatment arm are significantly more likely to have ever used the FSF for the purchase of food items (74% vs 55%, $p<0.05$) (Table 10.5). Among those who are not using the FSF, the common reasons cited are: "did not need any food items", "the SHG/VO did not receive any ration", "didn't know about the FSF" and "bought food from open market instead" (Figure 10.3). There are some differences between women in the treatment and control arms, but these differences are not statistically significant.

Table 10.5 Use of FSF

	Treatment arm (N=159)	Control arm (N=148)	All (N=307)	p-values
	Proportion	**Proportion**	**Proportion**	**T vs C**
Proportion that have ever used the FSF for purchase of food items	74.21	55.41	65.15	0.015
Proportion who have requested the FSF and been denied	8.18	5.41	6.84	0.291
Reason for denial of loan (N=12, 4, 16)				
Not enough money in the FSF	0	25	6.25	0.389
Not enough SHG members placed a request	16.67	25	18.75	0.773
Did not follow correct procedure	25	0	18.75	0.237
Previous loan from the FSF had not been repaid	41.67	25	37.5	0.404
VO executive members did not approve request	8.33	25	12.5	0.404
Someone in the SHG wanted to use the FSF for the purchase of food but was denied	8.18	4.05	6.19	0.162
Reason for denial of loan (N=13, 6, 19)				
Unaware of the FSF	7.69	0	5.26	0.476
Unaware of the procedure of applying for the loan	15.38	0	10.53	0.135
Not enough SHG members were interested	15.38	0	10.53	0.013
Could not get permission from the BO	7.69	50	21.05	0.042
Could not agree on what to buy	7.69	16.67	10.53	0.505
Could not afford the grains/food items	30.77	0	21.05	0.013
Process of acquiring the loan is time consuming	7.69	0	5.26	0.135

Source: Authors' calculations.

About 7 percent of women reported that they had requested for a purchase through the FSF but had been denied, and about 6 percent women reported that someone else from the SHG requested but was denied. Among women who were denied the use of the FSF, the primary reasons cited were not having repaid a previous loan from the FSF, did not follow the right procedure, did not have sufficient number

of SHG members placing the request and VO executive members did not approve the request. Similar reasons were also seen for the denial of the request of other SHG members.

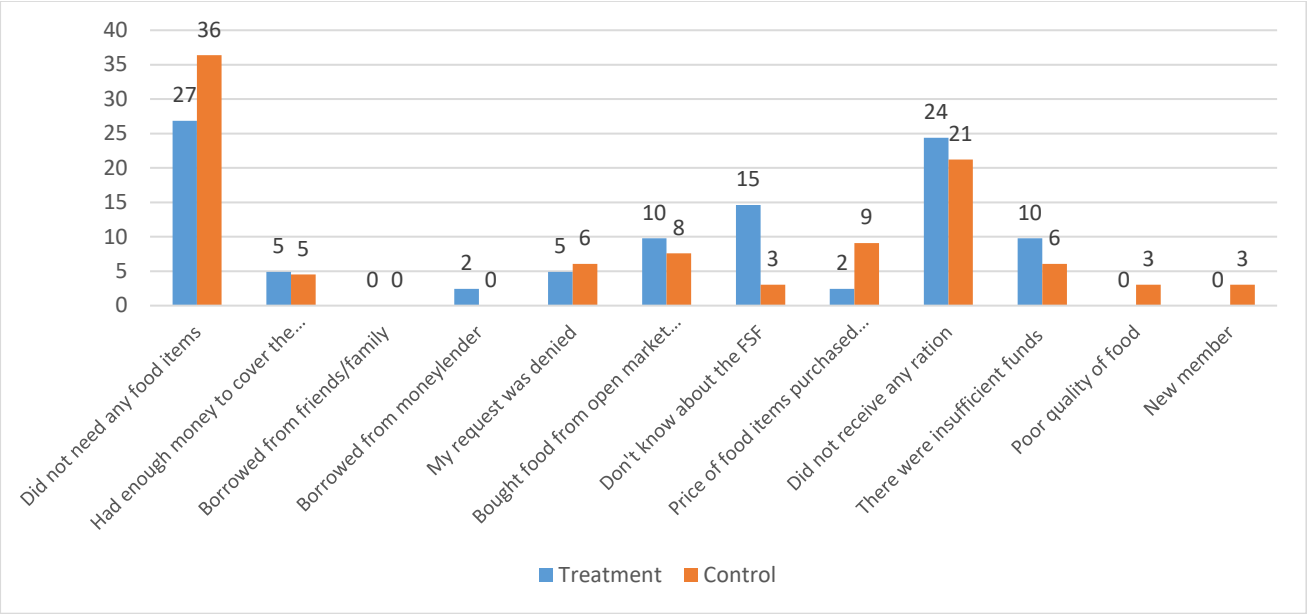

Figure 10.3 Reasons for not using the FSF

10.2.4 Kitchen gardens

Among the women in our sample, about 56 percent have had a kitchen garden at some point in the past (Table 10.6). Among those that have ever had a kitchen garden, 96 percent currently have one. About 40 and 20 percent of the women said that they heard about kitchen gardens from family/friends and the CM, respectively. Women in the treatment arm are more likely to have heard about kitchen gardens from SHG members as compared to women in the control arm (34% vs 23%, $p<0.05$). None of the women identified the LHS or the Kisaan Salaahkar as the initial source of knowledge of kitchen gardens. A large proportion of the women, 89 percent, are growing the fruits and vegetables on their own land. A small proportion, about 8 percent, do this on land that is leased from someone else.

Table 10.6 Use of kitchen gardens

	Treatment arm (N=110)	**Control arm (N=100)**	**All (N=210)**	**p-values**
	Mean (SD)/ Proportion	**Mean (SD)/ Proportion**	**Mean (SD)/ Proportion**	**T vs C**
Proportion that have ever had a kitchen garden[a]	57.29	54.35	55.85	0.71
Proportion that currently have a kitchen garden	95.45	96	95.71	0.914
Length of time that they have had a KG (in months) (N=105, 96, 201)	23.16 (25.03)	19.69 (28.36)	21.5 (26.66)	0.294
Who did you first hear about a kitchen garden from? (N=192, 184, 376)				
SHG members	34.55	23	29.05	0.027
Family/friends	39.09	41	40	0.791
CM	19.09	22	20.48	0.69
VRP	2.73	4	3.33	0.597
Kisaan Salaahkar	0.91	1	0.95	0.938
Senior staff	0	3	1.43	0.332

Community coordinator	0	2	0.95	0.066
World Vision	0	5	2.38	0.344
Where do you grow these fruits and vegetables (N=105, 96, 201)				
Land leased from someone else	7.62	9.38	8.46	0.714
On own land	92.38	85.42	89.05	0.221

Source: Authors' calculations.

These women are growing a wide variety of vegetables (Figure 10.4) and fruit (Figure 10.5) in their kitchen gardens. Common vegetables grown are gourd, bhindi, chilies, pumpkin, lauki, spinach and cucumber. A significantly higher proportion of women in the treatment arm reported growing jackfruit (16.2 vs 4.2, $p<0.05$). Among fruit, households grew mangoes, papaya, guava and banana. A significantly higher proportion of women in the treatment arm reported growing litchi (6.7 vs 0, $p<0.01$) and coconut (3.8 vs 0, $p<0.05$).

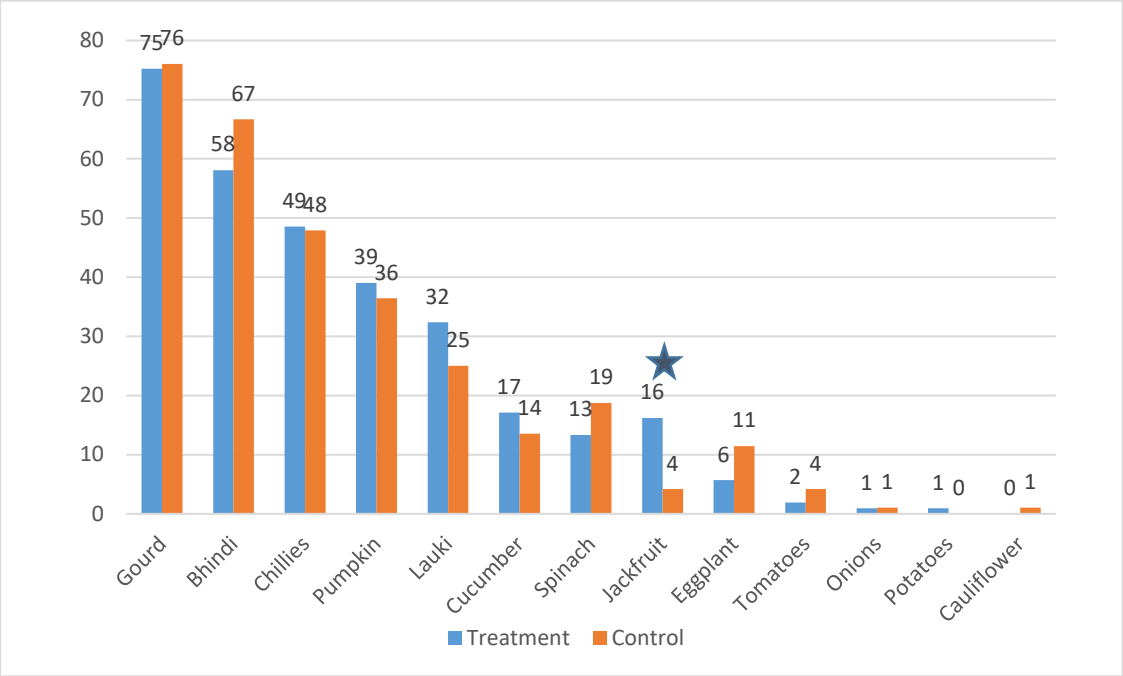

Figure 10.4 Vegetables grown in the kitchen gardens

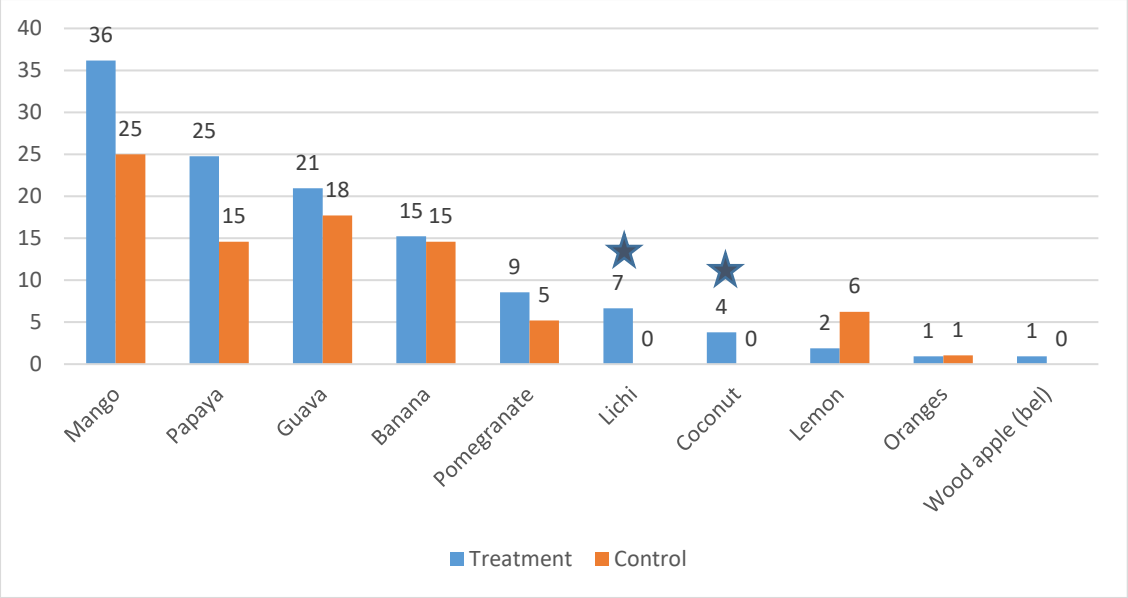

Figure 10.5 Fruits grown in the kitchen gardens

Almost all households that are growing vegetables and fruit in their kitchen gardens are consuming these at home (Table 10.7). Being able to grow vegetables and fruits at a cost lower than the market was identified as benefit of having a kitchen garden by 81 percent of the women. Other benefits include increased dietary diversity for the family and better-quality fruits and vegetables. Interestingly, more than half of the women said that there were no challenges to maintaining kitchen gardens. About 30 percent of the women said that kitchen gardens were time consuming. Among those who have never had a kitchen garden, not having space/land to grow it was identified as a constraint by 80 percent of the women. Other inhibiting factors identified were not having sufficient resources to buy inputs, not having the skills to do it, and not having enough time.

Table 10.7 Benefits and challenges of having a kitchen garden

	Treatment arm (N=110)	Control arm (N=100)	All (N=210)	p-values
	Proportion	**Proportion**	**Proportion**	**T vs C**
What do you do with what you grow in the kitchen garden?				
Eat at home	95.45	98	96.67	0.456
Part use and part sell	4.55	1	2.86	0.306
Other (see responses)	0	1	0.48	0.332
Benefits of having a kitchen garden				
Grow fruits and vegetables at lower cost than market	77.27	86	81.43	0.394
Increased dietary diversity for the family	33.64	25	29.52	0.326
Fruits and vegetables are of better quality	30	32	30.95	0.825
Challenges with having a kitchen garden				
Time consuming	27.27	34	30.48	0.62
Fruits and vegetables are of poorer quality	1.82	0	0.95	0.309
It is less expensive to buy these from the market	2.73	1	1.9	0.533
No challenges	53.64	50	51.9	0.865
Reasons for never having had a KG (N=84, 84, 168)				
Not enough money to buy inputs	10.71	1.19	5.95	0.029
No space/land on which to grow	72.62	88.1	80.36	0.108

Too time consuming	4.76	3.57	4.17	0.751
Lack of knowledge on how to grow plants	5.95	4.76	5.36	0.808
Resistance from family members	0	2.38	1.19	0.199
It is the wrong time of year to grow fruits and vegetables	1.19	0	0.6	0.226

Source: Authors' calculations.

10.3 Use of government services

In this section, we examine the use of different government services. Table 10.8 Participation and receipt of government services shows that a significant proportion of women in our sample have received services/information or participated in events organized by the government. For example, over two-thirds of the women have received THR and someone from their household has received pre-school education. Almost all women have participated in the VHSND and received information about immunization. About 67 percent of the women received money through JSY during their last pregnancy. The average amount received through JSY was INR 1400, which is exactly the amount it stipulated by the government under this scheme. Roughly 56 percent of the women report receiving some benefit from JSSK during their last pregnancy. Among those that reported receiving any benefit, 56 percent said that received money, 89 percent said that they could deliver at a public health facility free of charge and 19 percent said they received free transportation to the health facility. This lines up somewhat with the provisions under this scheme, which are essentially free of charge delivery in a public health facility, free transportation to the facility and free food/drugs and health check-ups.

In our sample, 36 percent of the women had participated in VHSND in the 3 months prior to the survey. This proportion was not different across arms. Services received at the VHSND are presented in Figure 10.6. Among those that participated, 93 percent received immunization services. Other services received include take home rations (25%), ANC services (35% in T vs 19% in C, $p<0.05$), newborn care(36%), growth monitoring (37% in T vs 48% in C, $p<0.05$) and counselling on breastfeeding(36%), complementary feeding(40%), hygienic handling of complementary foods(33%), etc. Women also received information about government schemes such as JSY and JSSK at the VHSND.

Table 10.8 Participation and receipt of government services

	Treatment arm		Control arm		All		p-value
	Mean (SD)/ Proportion	**N**	**Mean (SD)/ Proportion**	**N**	**Mean (SD)/ Proportion**	**N**	**T vs C**
Proportion who received/participated in this service from the AWC:							
Distribution of THR	69.41	255	66.53	239	68.02	494	0.778
Pre-school education	67.39	184	71.35	185	69.38	369	0.341
VHSND/Immunization Day	99.25	266	98.83	257	99.04	523	0.565
Information about immunization services	99.22	128	99.03	103	99.13	231	0.857
Growth monitoring	98.13	107	95.58	113	96.82	220	0.236
Referrals to Nutrition Rehabilitation Center	100	2	0	1	66.67	3	-
Information on childcare	100	9	100	2	100	11	-
Counselling on various topics	97.62	42	98.28	58	98	100	0.83
During last pregnancy, received money through JSY	62.46	285	72.83	265	67.45	550	0.371
Amount of money received (INR)	1405.06 (89.11)	178	1396.11 (92.13)	193	1400.4 (90.68)	371	0.34
During last pregnancy, received some benefit from JSSK	55.29	255	56.79	243	56.02	498	0.995
What did she receive?							
Money	62.41	141	50	138	56.27	279	0.382
Free delivery	89.36	141	89.13	138	89.25	279	0.942
Free transportation to health facility	19.15	141	19.57	138	19.35	279	0.969
Free health checkups for women and children	4.96	141	1.45	138	3.23	279	0.376
Free medicines for women and children up to 30 days after delivery	8.51	141	5.8	138	7.17	279	0.764
Food	11.35	141	10.87	138	11.11	279	0.918

Source: Authors' calculations.

Note on sample sizes: Only respondents who had heard of the schemes were asked if they had availed of the schemes during their last pregnancy. Only those who had availed of the scheme were asked what benefits they had received. Other than the question about money from the JSY, questions about benefits were multiple response, allowing respondents to mention all the benefits they remembered.

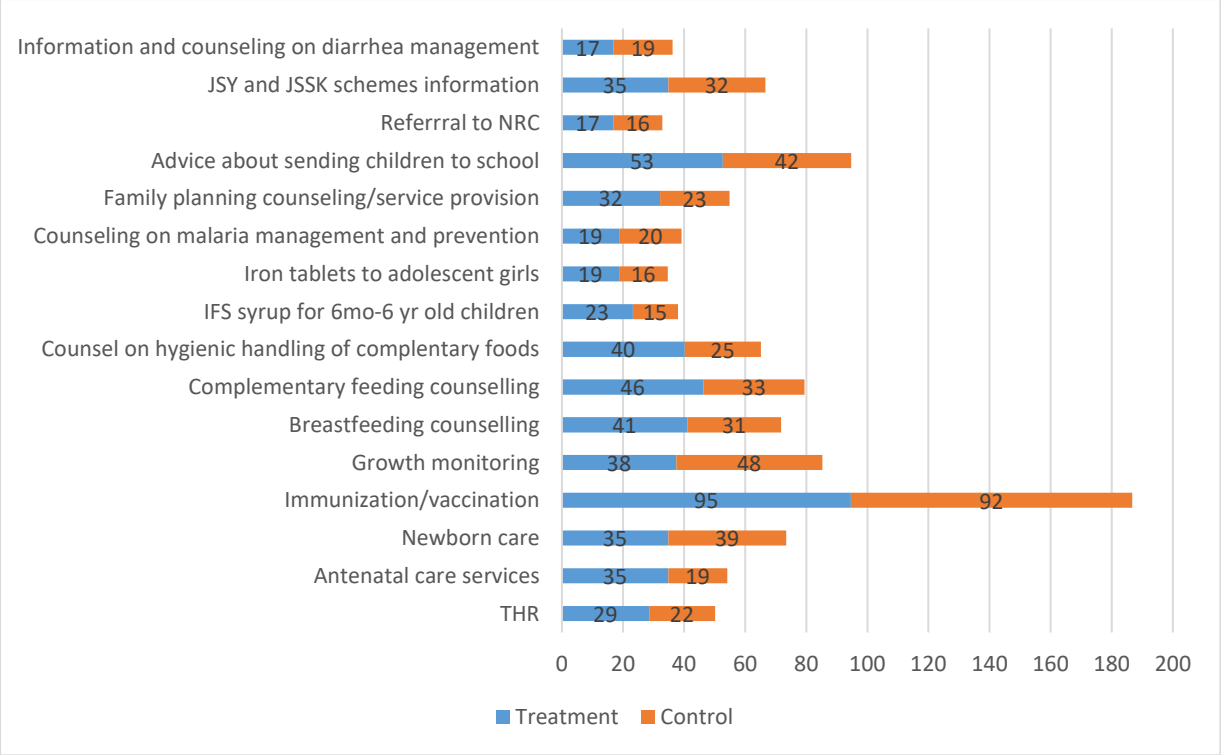

Figure 10.6 Services received at VHSND

Summary

- Exposure of respondent women to the message that all household members should eat tri-colored foods is not very high. However, among those that have heard this message almost all have tried it.
- Knowledge of the message that children under the age 2 years should eat tri-colored foods, is also not very high, with close to 35 percent of the mothers reporting having heard of the message in the treatment group and 19 percent in the control group, where the difference in knowledge among mothers across the treatment and control group is statistically significant. Among those who had heard of this message most mothers have tried it.
- A much larger fraction of households had heard about handwashing before preparing food, before feeding children and after defecation and all report having tried it at home.
- The main sources of the messages on diet were the Anganwadi center and SHG meeting. Other common sources are family members, AWW, ASHA and the CM.
- The main sources of the hand-washing message are family members, SHG meeting, anganwadi center or the ASHA. There were no significant differences between source of exposure to the message across the two arms baring a few exceptions.
- Handwashing practices are mixed, most of women reported that adults in their households always wash hands after using the toilet, however, about one-third of them reported that adults never wash hands after handling fecal matter.

Use of SHG and VO loans and services

- Roughly two-thirds of the women in the sample have received a loan from their SHG with an average amount borrowed ranging between INR 6744-7330. These patterns are similar across

the treatment and control groups. When asked how this loan was used, about half of the respondent women reported using it for medical expenses.

- A much smaller fraction of women report taking a loan from the VO's HRF as compared to borrowing from the SHG directly.
- The two primary reasons cited for not borrowing from the HRF, are that they did not have a health emergency and had enough money to cover shocks. Other reasons were that they were denied the loan and did not know about the HRF.
- About a fifth of the women requested a loan from HRF but were denied and the primary reason for this denial was cited as there being not enough money in the HRF, where this was more so in the treatment arm.
- Women in the treatment arm are more likely to have ever used the FSF for the purchase of food items. Among those who are not using the FSF, the common reasons cited were that they did not need any food items, didn't know about the FSF and bought food from open market instead
- A small fraction of women reported that they requested to purchase food items through the FSF but were denied and the primary reasons cited were not having repaid a previous loan from the FSF, not having followed the right procedure, and VO executive members not approving the request.
- Among the women in our sample, about 56 percent have had a kitchen garden at some point in the past. Among those that have ever had a kitchen garden, almost all currently have one.
- Main sources of hearing about kitchen gardens were family/friends and the CM. Women in the treatment arms were more likely to have heard about kitchen gardens from SHG members as compared to women in the control arms. None of the women identified the LHS or the Kisaan Salaahkar as a source of initial knowledge of kitchen gardens.
- About 90 percent of the women who have a kitchen garden have it on their own land. A small proportion, about 8 percent, do this on land that is leased from someone else. They are growing a wide variety of vegetables in their kitchen gardens.
- Almost all households, that are growing vegetables and fruit in their kitchen gardens, are consuming these at home. Being able to grow vegetables and fruits at a cost lower than the market was identified as benefit of having a kitchen garden by large majority of the women. Other benefits identified include increased dietary diversity for the family and better-quality fruits and vegetables.
- Among the challenges of having a kitchen garden, interestingly more than half of the women said that there were no challenges. While others said that kitchen gardens were time consuming.
- Among those who have never had a kitchen garden, not having space/land to grow it was identified as a constraint by 80 percent of the women. Other inhibiting factors were not having sufficient resources to buy inputs or the skills to do it.

Use of government services

- Over two-thirds of the women have received take home rations and someone from their household has received pre-school education.
- Almost all women have participated in the VHSND and received information about immunization.
- Two thirds of the women received money through JSY during their last pregnancy. The average amount received through JSY was INR 1400, which is exactly the amount it stipulated by the government under this scheme.

- Roughly 56 percent of the women report receiving some benefit from JSSK during their last pregnancy. Reported benefits included: receipt of money, institutional delivery free of charge and free transportation to the health facility. This lines up with the provisions under this scheme.
- More than third of the women in our sample had participated in VHSND in the 3 months prior to the survey and over 90 percent report receiving immunization services.

11. Summary and Implications

In this chapter, we summarize the main findings as they relate to the key research questions for the process evaluation, given in Chapter 2. For each key research question, we discuss what seems to be working, what needs to be strengthened, and then offer specific recommendations to strengthen implementation. We conclude with some implications for the impact evaluation.

Question 1:
Are critical intervention platforms for the behavior change communication (e.g., SHGs, VOs) and convergence (e.g., convergence committees, Annaprashan Diwas & Bachpan Diwas) in place and functional?
Domain: Implementation platforms (Chapter 6)

What's working:

The findings from the process evaluation show that key intervention platforms for the behavior change communication are, to a large extent, in place and functional. In both the treatment and control arms the community-based organizations – SHGs and VOs – and the VO-level Procurement Committee exist, meet fairly regularly, and perform their basic functions. There is some evidence that the ICDS-run community events – Annaprashan and Bachpan Diwas – are taking place in the treatment arm.

What needs to be strengthened:

The main challenges identified with respect to Question 1 are the following:

- Procurement committees in the control areas are not procuring food grains. In treatment areas, there were some reports of committees being used only to purchase machines. Even when food grains are being purchased, the main item being bought is rice. The intervention aims to make these procurement committees more nutrition-sensitive in their purchasing plans, but the findings suggest that the committees are not yet functional enough to go beyond the basics.
- The community events do not take place at the frequency intended, and based on household and CM responses it appears that the supply of services at these events is not as intended. Household awareness of and participation in these events is very limited.
- During the harvest season, routine SHG meetings do not take place, or are held only for the purpose of depositing money.

Our recommendations:

- The work of continuing to add new groups and to federate them is time-consuming and detracts from the other duties of the JEEViKA staff. Rather than focusing on the formation of new groups, the program staff should consider strengthening the existing groups, supporting them to meet regularly, and ensuring the basic savings and credit functions are being met.
- The community events need to be held regularly, and the services provided within them need to be strengthened. Holding the Bachpan Diwas four times a month requires significant effort on the part of program staff, which might be the reason why we see this event being held irregularly. Reducing the frequency to twice a month, but routinizing the day/s on which it is held could help reduce staff workload and make it easier for them to conduct this event regularly.

Question 2:
Do all key actors know their roles and responsibilities in relation to the goals of the program, and their relationship to one another?
Domain: Training/outcomes of training (draws upon Chapters 5 and 6)

What's working:

- JEEViKA staff (ACs, CCs, LHS) and key cadre's (CM, VRP) knowledge of the aim of the pilot, and of their specific roles and responsibilities within the pilot was good. CM awareness of the basic elements of the standard JEEViKA model - JEEViKA funds (HRF and FSF) and the processes involved in accessing them – is also high, as is VRPs knowledge around kitchen gardens and their role in promoting them. This means that the basic training on tasks was well absorbed and staff are aware of what they have to do on the ground.
- Staff are also aware of one another and how their roles intersect. This is especially so in the case of supervisory relationships, for example between the CM and the CC, or the BPM and the block-level staff. There are mechanisms built into the JEEViKA system which make sure that work is reviewed at the block level on a regular basis, workplans are devised, and targets are set to help prioritize actions. The monthly review meetings at which progress over the last month is discussed and assessed, is one such example. However even when the relationship is not one of a supervisory nature, as with the CM and the VRP, awareness of each other's roles and the way they intersect is high.

What needs to be strengthened:

- Though block-level staff are aware of their responsibilities, there is an increase in ambiguity around own roles and responsibilities, as well as around the roles and responsibilities of other key actors as one moves further up the hierarchy of JEEViKA staff.
- We also learnt about additional contextual factors that contribute to implementation challenges:
    - First, on staffing issues, we identified staff shortages as a bottleneck to implementation. There is a shortage of JEEViKA staff (especially CCs), which makes it hard to implement the program. This shortage is particularly acute in one block – Pattarghat – perhaps because it is furthest from the district headquarters, which makes commuting difficult, especially for female staff.
    - Secondly, we identified the top-heavy nature of the JEEViKA structure - with many layers of individuals, a complex reporting system, and multiple requests on the same frontline worker or field staff (the CM/CC, respectively) - as a key challenge. Several of the higher-level staff at the district and state levels supervise multiple JEEViKA activities, and do not work directly on the pilot. This results in a limited appreciation of the multiple requests being made on lower-level staff, and of the many additional responsibilities that have been given to the CCs and CMs. These responsibilities distract from their main tasks under the pilot and take up time that could otherwise be spent on the nutrition intervention during SHG meetings.
    - Third, the transfer of high-performing staff from control to treatment areas to bolster the intervention might result in a deterioration of the CBOs and their functioning in the control arm GPs, to the detriment of the overall goals of JEEViKA in these areas.
    - Fourth, delays in salary payments to the CMs are another impediment to delivery, as they severely impact CM motivation.
    - Finally, all CMs and some CCs are women, for whom traveling long distances as well as having to commute after dark is hard and often dangerous.

Our recommendations:

- The CNRP, a dedicated cadre for the health and nutrition work, has recently been introduced in treatment panchayats. If this cadre could be made responsible for all health and nutrition related tasks, this would greatly ease the pressure on the CMs.
- Higher level staff at the district and state levels should try to coordinate/organize the demands being made on the CMs and CCs to ensure a reasonable workload and limit their hours.
- Reconsider the educational and other qualifications that are required of other JEEViKA staff, such as CCs and ACs, in light of the tasks they are required to perform. Setting these qualifications too high limits the pool of applicants and prevents timely recruitment to these positions.

Question 3:

Do all the actors possess necessary content knowledge?

Domain: Training/outcomes of training (draws on Chapters 5, 6 and 7)

What's working:

- The BCC content is largely accurate and comprehensive, covering much of the material in the ASHA training manuals and providing many of the same messages.
- New cadres of CNRPs and the HSC are being trained and will begin working soon, which will ease the burden on the CMs and CCs.
- CMs in the treatment arm were more aware than CMs in the control arm on topics on birth preparedness, on the timing of complementary feeding, on the diet of a pregnant woman, and on breastfeeding (early initiation, the duration and benefits of exclusive breastfeeding). CMs in both arms are aware of the role of cleanliness in being healthy.
- CMs in the treatment arm were also more aware of the HRF, FSF, and of kitchen gardens, and were more familiar with the processes involved in accessing these JEEViKA funds and interventions.
- In both arms, there was an improvement in knowledge between the baseline and PE around the consumption of IFA tablets and updating the immunization card. CMs in the treatment arm also improved in their awareness of needing to identify a hospital for delivery.

What needs to be strengthened:

- Topics/content of training
    - The JEEViKA staff expressed a desire for more technical training on health and nutrition topics specific to the pilot, e.g. the ACs requested training on the same modules the CM is trained on, to be able to monitor them better. The LHS also requested training on health and nutrition.
    - The BCC content provides generic messages, which cannot be easily distinguished from the messages households are likely to receive from other government frontline workers.
    - Health and nutrition training for several JEEViKA staff, including the BPMs, was also considerably delayed, with some staff receiving training only in February 2017. This affected understanding and ownership of the pilot.
    - CMs received no specific training on the use of FSF, HRF or kitchen gardens in the 12 months preceding the survey.
- Training logistics

    - The training venues are far from the homes of the CMs, requiring them to travel long distances to attend. In the absence of any childcare arrangements, these women bring their babies with them, which proves to be a distraction.
    - Training venues are too small to allow the trainers to use more innovative methods of learning, like games and skits.
- While there have been additions of new cadre at the ground level, these workers are part-time (e.g. they work only a fraction of the days in a month), and do not assist the CMs with the work of other thematic areas.
- Content knowledge:
    - CM knowledge of the health and nutrition BCC was limited, and more important, knowledge was not markedly different across the treatment and control arms for a majority of the content knowledge domains. Particular areas where improvement is needed are the timing of complementary foods such as eggs, meat and fish, and knowledge about care of the pregnant woman.
    - In the control arm, CM awareness of the availability of JEEViKA funds and interventions (FSF, HRF and kitchen gardens) and the procedure for accessing these needs to be strengthened.
    - Between the baseline and the PE, there has been a deterioration of knowledge on WASH practices, in feeding of colostrum, and in feeding pregnant women more, and more fruits and vegetables. This deterioration is, however, fairly uniform across arms.

Our recommendations:

- It would be useful to consider an investment in refresher training sessions for CMs and for other staff, including those who supervise the CMs. The CM training needs to be strengthened considerably if the intervention is to succeed. Limited content knowledge for the CMs can severely limit their ability to facilitate awareness among the women in the SHGs. Some specific aspects of training that would be helpful to address, from a content perspective, are the following:
    - The initially developed CHETNA modules were as comprehensive as the current BCC modules, and also had diverse formats of dissemination such as use of picture cards, story and games for each module. Since the new modules do not appear to be a marked improvement over the CHETNA modules, we would recommend that any content revisions to the training materials also consider which modules are used for the refresher training.
    - It would also be useful to incorporate content knowledge assessments into the training, to help assess whether the refresher training sessions are leading to shifts in content knowledge. One test before the start of the training could help to assess starting levels of knowledge and to prioritize those topics that need more attention. A post-training assessment could help to assess changes in CM knowledge as a result of the training and pinpoint areas that still remain a source of confusion for the CMs. Training assessments could also help to identify weaker CMs who can then be targeted for more active support from other JEEViKA staff.
    - It is important to make the link between the health and nutrition BCC and the existing JEEViKA funds and interventions, like the FSF and the kitchen gardens, during the trainings. This could ensure that the CM will also make the same link when disseminating the information to the households.
- A review of training logistics would be appropriate to identify training of the appropriate size and location. Specific considerations that could help smoothen training logistics include holding training closer to the residence of the CMs, splitting the CMs into smaller groups based on geographic proximity, or conducting residential training.

Question 4:
What factors affect the delivery of the BCC messages related to health and nutrition, kitchen gardens? Where relevant, is the BCC being provided in a timely manner? What factors affect whether and how key players take requisite actions following the BCC content delivery?
Domain: Implementation processes (draws on Chapter 7)

What's working:

- In about 65 percent of the SHG meetings observed as part of the process evaluation, health and nutrition topics were discussed. The topics of discussion were dietary diversity, pregnancy and new-born care, breastfeeding, and complementary feeding, and these correspond to the topics on which the CMs received training most recently.
- Nearly all the CMs in the treatment arm reported disseminating the information to SHGs within one week of receiving the training. Several CMs report that the topic of food and dietary diversity generated the most interest among the SHG members, followed by birth preparedness and new-born care, and ANC, pregnancy and breastfeeding.

What needs to be strengthened:

- Insights from observing the SHG sessions indicate the following areas that challenge effective implementation of the BCC sessions:
    - In some cases, topics other than health and nutrition take precedence in the SHG meetings, and the health and nutrition-related topics are either not discussed at all, or discussed only for a very limited time.
    - Other impediments to dissemination of nutrition information include CMs' inability to communicate the messages well.
    - Only a few CMs reported using picture cards, games and flipcharts while disseminating the information. In a population with limited education, such aids increase understanding and retention and generate greater interest in the content.
    - In general, no links were made between the information disseminated and the resources available to be able to implement the suggestions. During SHG meeting observations, only in one meeting did a CM discuss kitchen gardens with the members.
- On factors that affect roll-out of accompanying components like the promotion of kitchen gardens and use of JEEViKA funds, we find the following:
    - Overall, the intervention components that aim to change the emphasis of existing JEEViKA funds and interventions – e.g. encouraging the use of the FSF for pregnant and lactating mothers, and growing and consuming more nutritious fruits and vegetables in kitchen gardens – are either not happening in the field, or are not having an impact.
    - VRPs cited low remuneration, lack of time, and inadequate knowledge of practices due to poor training as barriers to implementing their duties in promoting kitchen gardens.
    - Knowledge of basic JEEViKA platforms like the HRF and FSF among other staff – the VO executive members, the Procurement committee members – was low, and their knowledge of their role in enabling access to these platforms was incomplete. VO executive members possessed greater knowledge of the HRF than the FSF.
- Understanding among households of the process of accessing the FSF is mixed, and most households do not know that the VO committees – the Procurement and Food security committee – have any role to play in approving the request for the FSF.

Our recommendations:

- In relation to the health and nutrition BCC, we recommend the following:
    - Increase the availability and use of visual aids and games to improve retention, consistency of delivery of content, and to increase participation from the SHG women. As mentioned above, the original CHETNA BCC modules had attractive and informative visual aids that would be useful for this purpose.
    - Consider integrating more training and support than is present currently to strengthen *how* the messages are being delivered. CMs need adequate practice in delivery through role-playing and active monitoring by the trainers and other JEEViKA staff.
    - It might also be helpful to consider developing short **scripted sessions for each module** that take into account the limited amount of time available in the SHG sessions to deliver the messages and guide the CM through every step of the dissemination. Weaker CMs, especially, would greatly benefit from such scripts and guides to dissemination.
- To strengthen the roll-out and use of the funds, we recommend that VO level committees be strengthened and their knowledge of their roles be improved so that they can play an active role in promoting and providing access to the basic JEEViKA platforms.
- Minor tweaks to the existing JEEViKA platforms – such as emphasizing the needs of pregnant and lactating women in FSF purchases - are unlikely to yield dividends, especially if the emphasis is not made clear to those VO committees that are actively involved in implementing them. Instead the pilot may want to consider a focus on the more clearly distinguishable component of the health and nutrition BCC.

Question 5:
What factors affect the functioning of the convergence committees and actions of key players to ensure demand for and utilization of health and nutrition services?
Domain: Implementation processes (Chapter 8)

What's working:

- Government frontline workers – the ASHA and AWW – display reasonably good knowledge of the presence of the CM and her role in health and nutrition.
- Coordination between the AWWs and the CMs was also good, with several AWWs mentioning that the CM provides assistance at the VHSND, and informs SHG women about the benefits of immunization.
- Convergence and coordination committees have been set up and have met at least once. The GP-level coordination committee discusses supply-side issues like the lack of IFA tablets in the AWC.

What needs to be strengthened:

- Though the CMs were aware of the existence of the FLWs and that they worked with women and children in the 1000-day window, their awareness of the exact roles of each FLW was poor. Often, they thought tasks assigned to one FLW were in fact the responsibility of the other.
- Coordination between the CMs and ASHAs was poor, with more than half the ASHAs reporting that they did not assist the CM in her duties, and in turn did not receive any assistance from her in performing their own.

- Coordination committees at all levels are plagued by scheduling issues, with meetings not being held regularly because of one senior official or another being unavailable at the scheduled time. These meetings are also not directly part of the tasks of any of the government functionaries so they are given low priority.

Our recommendations:

- CM knowledge of the roles of other frontline workers and how coordination with them can improve both sets of workers' functioning needs to be improved.
- The coordination committees are ambitious, and the long list of participants at each level makes it very hard to convene meetings. The scope of these meetings should be re-assessed, and only those workers who are crucial to the functioning of the pilot retained. Directives from higher level department functionaries – e.g. at the state level – would reduce the reluctance of staff from other government departments to participate in these meetings.

Question 6:
To what extent are all the households with women in the first 1,000-days period receiving critical messages related to health and nutrition?
Domain: Exposure – reach of key messages (Chapter 9)

What's working:

- More than 95 percent of the respondents reported discussing savings and credit in their SHG meetings, suggesting that the core function of the SHG platform is in place.
- A higher proportion of treatment arm respondents reported discussing a range of nutrition topics such as ANC, complications during pregnancy, birth preparedness, care of the newborn, post-partum complications in mother and newborn, and the importance of dietary diversity in their SHG meetings.
- A significantly greater proportion of women in the treatment arms also reported discussing community events like the Annaprashan and Bachpan Diwas.
- WASH was reported as being discussed by about 60% of the respondents, this proportion did not differ across treatment or control arms.

What needs to be strengthened:

- Less than half the women reported discussing *poshak badi* cultivation, different ways of achieving food security, use of the FSF, use of HRF for healthcare, government schemes and breastfeeding practices, and these proportions were comparable across the treatment and control arms.
- **Most importantly, very few differences in exposure were observed across households in the treatment and control arms.**

Our recommendations:

- There is a need to increase the frequency of discussion on health and nutrition related messages. These are currently being discussed at SHGs in both treatment and control arm arms.
- There is also a need to strengthen the discussion of the basic JEEViKA platforms – funds and kitchen gardens – and of government schemes.

Question 7:
What factors affect trial and adoption of the key BCC messages received?

Domain: Knowledge, Utilization/Impact (Chapter 10)

What's working:

- On the health and nutrition BCC, we find that overall, **differences in knowledge and utilization between households in the treatment and control arms were minimal and few improvements in knowledge were seen in the treatment arm between baseline and PE.**
    - Knowledge of types of foods and their functions was reasonably high, with HHs responding that milk and milk products make bones stronger, grains provide the body with energy, and green leafy vegetables and fruits protect the body from illness. Treatment arm households were significantly more likely to report that grains provide the body with energy.
    - Knowledge of breastfeeding practices was high. More than 75 percent of the mothers knew that the child should be fed colostrum, more than 80 percent knew that breastfeeding should be initiated within 1 hour after birth, and more than 95 percent knew about the need to exclusively breastfeed the child for the first six months.
    - Knowledge of handwashing practices was high. A significantly larger proportion of treatment arm households said that child stools should be buried.
    - Knowledge of iron deficiency anemia was uniformly high across arms, though a larger proportion of treatment arm households did report that spoon or bent nails were a sign of a person being anemic. Knowledge of the number of IFA tablets that should be consumed was low.
    - Awareness of government schemes targeted at mothers and young children - such as the services provided at the AWC, and schemes like JSY and JSSK - was also high.
    - From baseline to PE, there was an improvement in knowledge around handwashing, anemia, some of the benefits of exclusive breastfeeding (e.g. it helps the baby grow better), and on whether the mother should stop feeding the child if she becomes pregnant. However, this improvement was seen in *both* arms.
- On the kitchen gardens and funds:
    - Among the women in our sample, more than half currently have a kitchen garden. Women in the treatment arms were more likely to have heard about kitchen gardens from SHG members as compared to women in the control arms. They are growing a wide variety of vegetables in their kitchen gardens.
    - Almost all households that are growing vegetables and fruit in their kitchen gardens are consuming these at home. More than half of the women said that there were no challenges to growing kitchen gardens.
    - Women in the treatment arm are more likely to have ever used the FSF for the purchase of food items.
- Roughly two-thirds of the women in the sample have received a loan from their SHG with an average amount borrowed ranging between INR 6744-7330.
- Utilization of government provided services was reasonably high but not different across households in the treatment and control arms. Over two-thirds of the women have received take home rations and someone from their household has received pre-school education. Almost all women have participated in the VHSND and received information about immunization. Two thirds of the women received money through JSY during their last pregnancy, and the amount received

matches the stipulated amount. Roughly 56 percent of the women report receiving some benefit from JSSK during their last pregnancy, and the services they receive line up with the provisions under this scheme.

What needs to be strengthened:

- On health and nutrition BCC:
    - The respondents' knowledge of appropriate age of introducing complementary foods is quite poor, especially with regard to introducing flesh foods, and in fact this knowledge has *deteriorated* between the baseline and PE in both arms.
    - The knowledge of treatment arm households on early initiation of breastfeeding has also deteriorated between baseline and PE. In both arms, knowledge around what a mother should do if she is not producing enough milk, on nutrition of a pregnant woman, on IFA tablet consumption and on exclusive breastfeeding protecting the child against illness has also shown a deterioration since baseline.
    - Knowledge of the eligibility requirements of the government schemes, and of their benefits, was not very high.
    - Apart from handwashing, WASH-related knowledge was poor, with almost 90% of households reporting that child stools should just be left in the open.
- On kitchen gardens and the use of funds:
    - Among those who have never had a kitchen garden, not having space/land to grow it was identified as a constraint by 80 percent of the women. Other inhibiting factors were not having sufficient resources to buy inputs or the skills to do it.
    - Fewer women took a loan from the VO's HRF compared to borrowing directly from the SHG. About a fifth of the women requested a loan from HRF but were denied, primarily because there being not enough money in the HRF. This was cited as a reason more often in the treatment arm.
    - A small fraction of women reported that they requested to purchase food items through the FSF but were denied and the primary reasons cited were not having repaid a previous loan from the FSF, not having followed the right procedure, and VO executive members not approving the request.
- Awareness among households about these community events is also quite low and as a result participation is even lower.

Our recommendations:

- Our main recommendation would be for the JEEViKA staff to focus on strengthening the BCC component and making linkages between topics in the BCC sessions to the other available services.
- Strengthening discussions and linkages with the use of existing JEEViKA platforms, and on the ways to grow kitchen gardens in limited space would be helpful to ensure better integration of the intervention components.
- Awareness of community events needs to be improved as these form an important part of the overall intervention package (where important services – such as immunization – are delivered).

IMPLICATIONS FOR THE EVALUATION

Examining the results along the impact pathway (summarized in Table 11.1 below), we find that the intervention components are only now settling into the implementation framework of the JEEViKA program. JEEViKA staff are clearly aware of their roles, and of the intersection between their work in the SHGs and the additional components provided by other actors in the government system - health and nutrition frontline workers, and the coordination committees at all three levels. However, there are significant concerns with the content knowledge the CMs hold – their own knowledge of health and nutrition is limited and in some cases, even wrong. The CM's knowledge of the roles of other frontline workers, and how coordination with them can reinforce their mutual functioning, is limited. Major challenges were also identified relating to the CM's workload and motivation. All these have important implications for the quality of implementation and to the extent to which they are able to convey this information to their key audiences, the women in the SHG meetings and how well they are able to integrate with other available government services.

Although more SHGs in the treatment area are discussing health and nutrition, the SHG meetings can only integrate so much. The SHG platform is often used for other interventions – ODF drives, life insurance enrollment drives, and so on – leaving only a small window of time where health and nutrition messages can be discussed. The use of the SHG platform to mobilize women for different issues on occasion is unlikely to change; therefore, streamlining and organizing the routine BCC content could potentially help assure greater fidelity to the intervention and more consistency in message delivery.

We found more integration of health and nutrition topics into the SHGs in the treatment areas, as intended by the intervention, and greater exposure to the health and nutrition topics among women in the treatment area. However, what is somewhat puzzling is that health and nutrition knowledge among women in treatment areas was not markedly better than women in the comparison areas. And indeed, there did not seem to be an improvement in health and nutrition knowledge over time among women in the treatment areas as compared to those in the control areas. This finding could relate to the limited time for dissemination of these topics in the SHG meetings, the limited knowledge of the CMs themselves, and the possible variability in how the BCC content is discussed in the SHG meetings. Given that the health and nutrition BCC is a core component of the intervention, considerable effort will need to be expended to improve its reach and quality in the treatment areas. Without significant differences across treatment and control arms in the knowledge of CMs or of the households, it would be unreasonable to expect differences in household practices or nutritional outcomes.

In closing, we conclude that the SHG platform is demonstrating potential for integration of health and nutrition, but several factors – CM capabilities and workload, time available in SHG meetings, and several other demands on the platform – currently limit the full-scale and high-quality integration of health and nutrition BCC and other components of the JEEViKA-MC intervention. These findings go beyond the scope of the current evaluation and pertain to larger issues of integration of health, nutrition and indeed, other social issues into the SHG platform.

Table 11.1: Summarizing differences between treatment and control areas

Area along the impact pathway	Overall situation	Differences between treatment and comparison groups	Implications
Functioning of SHG and VO platforms	Platforms in place, but several work context and time demands on CMs	No differences	Platform functioning not a major risk, but CMs face several work context issues that can affect motivation
Awareness of roles among CMs and other implementers	Good awareness	Treatment area CMs well aware of role in health and nutrition.	
Content knowledge related to roles	Knowledge is limited, overall. Several misconceptions	Few differences in H&N content knowledge. CMs in the treatment arm more aware of the HRF, FSF, and of kitchen gardens.	Training not effective in improving health and nutrition knowledge of CMs, needs strengthening
Implementation: SHG meetings	Held routinely, focus is mainly savings and loans	Amount of time spent discussing health and nutrition in SHG meetings in the treatment arm is limited.	Risk of loss of fidelity; consider short scripted sessions for BCC
Coordination committees	Meetings not regular, no grievance redressal mechanisms in place	Meetings only being strengthened in treatment arms	Unlikely to see any impact of these committees on supply-side issues
Exposure to messages	Women report that several H&N and WASH-related messages are being discussed in SHG meetings	Treatment arm households are more likely to have discussed community events in their SHG meetings. All other topics are uniform across arms.	No significant differences in exposure; dissemination of messages in treatment arm SHGs needs to be improved
Utilization: factors affecting trial and adoption	Knowledge of health and nutrition is variable by topic, but overall limited.	Few differences across arms in knowledge or utilization Few differences in kitchen	BCC delivery needs considerable strengthening For impact evaluation,

Area along the impact pathway	Overall situation	Differences between treatment and comparison groups	Implications
	Household knowledge and use of JEEViKA funds and kitchen gardens is reasonably high. Knowledge of government schemes (JSY, JSSK) is high but the proportion who received any benefits is lower in comparison. Knowledge and utilization of community events is very low.	gardens or in use of government schemes.	significant risk of finding no impact on knowledge or practice.

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Annexures

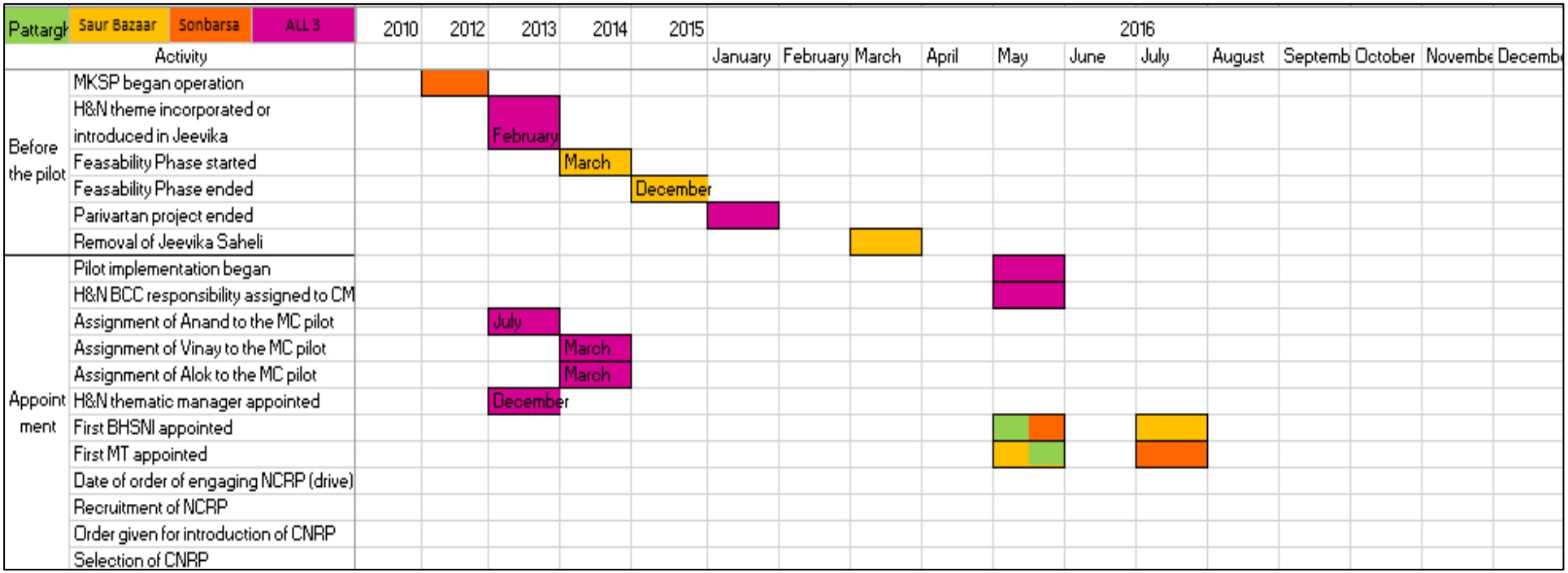
Table A.1: Specific areas of inquiry for each of the domains

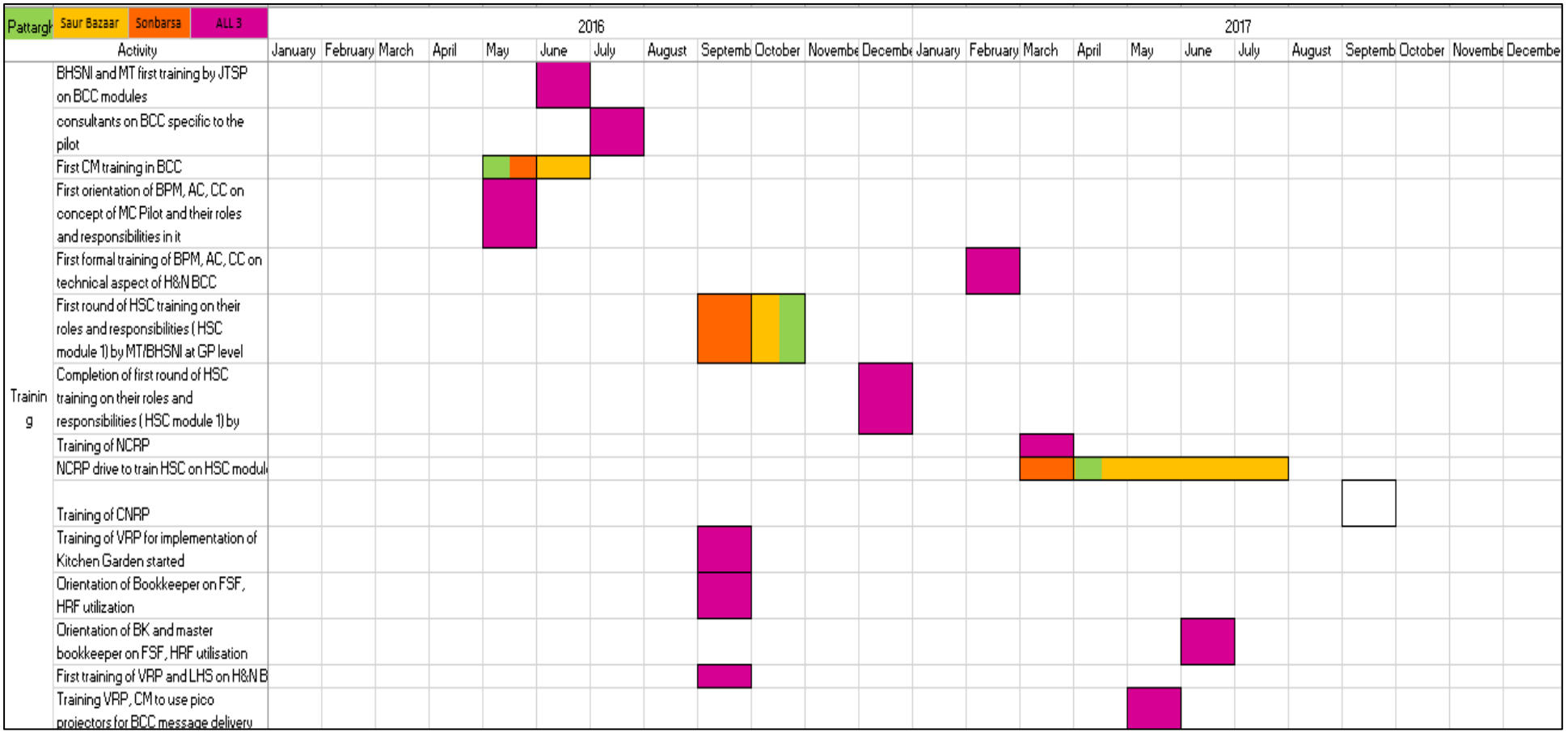
Domains	BCC	Kitchen gardens	Health risk fund/SHAN	Food security fund	Convergence
Implementation platforms	Are all SHGs in place and functional? Do they meet on schedule? Are all SHG office bearers in place, etc.	Are the VRPs and LHS in contact with the SHGs? Have inputs been provided through the livelihood fund (or SHAN fund in concerned Panchayats)?	Has the SHAN fund been set up for/disbursed to the VOs of designated Panchayats of Saur Bazaar? Are SHG members saving for the HRF/SHAN fund? Have they been able to access either of these funds from the VO?	Are VOs able to access the FSF?	Do the Panchayat, block and district convergence committees exist? Are they functional and do they meet as scheduled? Are Annaprashan Diwas, Bachpan Diwas functional? Does the Health Sub-Committee (HSC) exist? Is there regular dialogue between various government FLWs in the VO Social meeting?
Are adequate review and monitoring processes in place within the JEEViKA structure?					
Training/outcomes of training [knowledge, awareness, role clarity, etc.]	What is impact of training on community mobilizers' (CMs) knowledge about nutrition, its determinants, etc. Are the Community coordinator (CC), AC BHSNI trained in health and nutrition messages so that they can monitor their delivery or assess the exposure of households?	Are CMs, VRP, and LHS trained on their responsibilities and do they know about the linkages between this sector and nutrition? (Have the VRPs been trained by the LHS?) Does the CM know she is responsible for linking the SHGs to the VRP in case there are any livelihoods or kitchen garden related queries?	Have the book-keepers been trained about the use of the fund? Have the book-keepers oriented the SHG executive members on how they have to assist in the communication of the need for the fund to the VO? Are the SHG members aware of the use and procedure to access the fund?	Is the CM aware of her role in micro-planning community needs for the FSF, and communicating these to the VO? Are the members of the PC and the FSC aware of their roles in the VO?	Have the members of the convergence committees been oriented about their responsibilities and the scope of the committee? Do CM and HSC know about multisectoral determinants and their roles in bringing to SHGs/HH links with other interventions? Have the HSC members been trained to deliver nutrition messages, carry out demonstrations?

Domains	BCC	Kitchen gardens	Health risk fund/SHAN	Food security fund	Convergence
		Are SHGs aware of how to undertake kitchen garden cultivation? Do they know where to access inputs (seeds/capital) from?	Are the VO members aware of how the funds are to be disbursed?		
			Are the CMs aware of their role in promoting the use of these funds among SHG members (esp. pregnant and lactating women) for improving diet diversity, food security, sanitation and health outcomes?		
			Are key JEEViKA staff from the district-level downward provided with adequate training for and information on the JEEViKA-MC pilot in order to be able to perform their duties? Do they provide adequate support to the community-cadres?		
Implementation processes, reach to SHGs and quality	Are all SHGs in the JEEViKA-MC areas engaged in sessions on all BCC modules in a timely fashion? [*reach*] What factors influence CMs' ability to deliver all health and nutrition BCC modules to all SHGs? Is the health and nutrition information provided to the SHG members consistent across groups? How do CM and HSC coordinate for imparting nutrition messages? How do the BHSNI, Master Trainer, CC, AC and/or BPM	What are the facilitators and barriers for LHS and VRP to engaging and supporting the SHG members? To what extent does the VRP reach SHGS with information about these inputs, micro plans requirements, and guides them in plantation? Does VRP discuss issues related to KG implementation and adaptation in SHG/VO meetings? How often does a CM interact with LHS and VRPs?	To what extent do CMs reach SHGs with information about SHAN/HRF?	How do they make themselves aware of the types of products available on the market and their prices? How does the FSC make sure it is representing the needs of the poorest of the poor? What mechanisms are place in place for the purchase, storage, and distribution of food items by the VO's PC (e.g., godown, cars/other vehicles, etc.)? What foods do they typically procure? Is	Are meetings being routinely organized by the AC and BPM? What are the topics being discussed in the convergence committees? How are implementation issues being resolved? Are the BPM, BHSNI, and Manager (H&N) ensuring that matters of the Panchayat level are resolved at the block level? To what extent do CMs and HSC interact with the government frontline workers and what factors influence these interactions? What do they interact about? Do health subcommittees visit homes regularly? Are they helping

Domains	BCC	Kitchen gardens	Health risk fund/SHAN	Food security fund	Convergence
	monitor delivery of nutrition messages by the CM and HSC? How regularly do they attend dissemination in SHG meetings or visit households?	What factors influence coordination and information flows between the CMs, LHS, and VRPs?		procurement affected by nutrition and diet diversity concerns?	organize BD, AD and mobilizing HHs for the same? What topics do they choose to prioritize and why?
[Exposure] Reach of key messages/actions to women in SHG households	To what extent are 1,000-day women in SHG households receiving information on all critical topics in the BCC modules? What factors affect the completeness of reach to these women?	To what extent are 1,000-day women in SHG households receiving information on kitchen gardens? What are their perceptions about these messages?	To what extent are 1,000-day women in SHG households receiving information on use of HRF/SHAN to improve health outcomes through sanitation, timely treatment of illness, and improving nutrition?	To what extent are 1,000-day women in SHG households receiving information on use of FSF to improve their diet?	Are community members' grievances communicated to the relevant government officials?
Utilization/impact	How do health and nutrition messages shape IYCF awareness and perceptions among mothers and SHG members? What determines trial and adoption of key recommended IYCF practices by mothers? How do health and nutrition messages shape awareness and perceptions about women's diet? What determines trial and adoption of key recommended practices for improving women's dietary diversity? How do the BCC messages shape awareness and perceptions about hygiene? What determines trial and adoption of WASH practices? Are SHG members communicating these	How are messages about kitchen gardens being used by 1,000-day mothers and their families? What factors affect their ability to grow recommended foods? [Land, seeds, water, time burden, etc.] Does the SHG member own a kitchen garden? If yes, how long it has been maintained? Why was the kitchen garden started? What is grown? What happens to the produce? What are the factors influencing setting up of a kitchen garden? Has diet diversity improved?	What are the factors affecting use/frequency of use of this fund? For SHAN - How are messages about sanitation being used by 1,000-day mothers and their families? What factors affect their ability to practice critical sanitation behaviors such as construction and use of toilets? Are families able to better access curative care?	Are households accessing grains/what other food items through the FSF? What are the factors affecting use/frequency of use of this fund?	Are different departments (health, education, RD, ICDS, PDS, etc.) coordinating for better service delivery? Are SHG members/households accessing services from the AWC? Or are SHG members/ households utilizing services being provided by FLWs?

Domains	BCC	Kitchen gardens	Health risk fund/SHAN	Food security fund	Convergence
	messages to other household members or members of the community who are not part of these SHGs? What factors influence them?				

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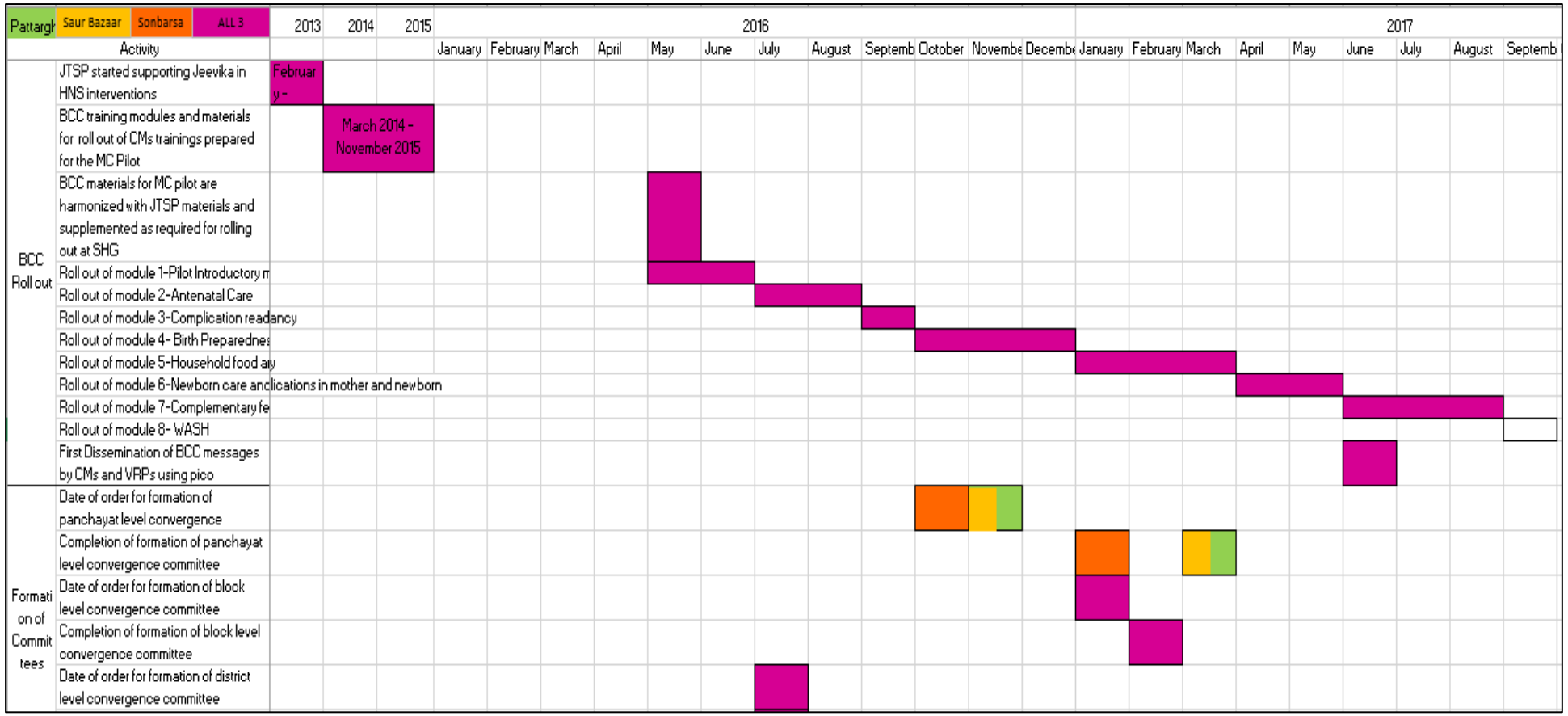
First CM training in BCC
First orientation of BPM, AC, CC on concept of MC Pilot and their roles and responsibilities in it
First formal training of BPM, AC, CC on technical aspect of H&N BCC
First round of HSC training on their roles and responsibilities (HSC module 1) by MT/BHSNI at GP level
Completion of first round of HSC training on their roles and responsibilities (HSC module 1) by
Training of NCRP
NCRP drive to train HSC on HSC modul
Training of CNRP
Training of VRP for implementation of Kitchen Garden started
Orientation of Bookkeeper on FSF, HRF utilization
Orientation of BK and master bookkeeper on FSF, HRF utilisation
First training of VRP and LHS on H&N B
Training VRP, CM to use pico projectors for BCC message delivery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BCC Roll out
JTSP started supporting Jeevika in HNS interventions
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BCC training modules and materials for roll out of CMs trainings prepared for the MC Pilot
March 2014 - November 2015
BCC materials for MC pilot are harmonized with JTSP materials and supplemented as required for rolling out at SHG
Roll out of module 1-Pilot Introductory m
Roll out of module 2-Antenatal Care
Roll out of module 3-Complication readancy
Roll out of module 4- Birth Preparednes
Roll out of module 5-Household food ay
Roll out of module 6-Newborn care anclications in mother and newborn
Roll out of module 7-Complementary fe
Roll out of module 8- WASH
First Dissemination of BCC messages by CMs and VRPs using pico
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Date of order for formation of block level convergence committee
Completion of formation of block level convergence committee
Date of order for formation of district level convergence committee

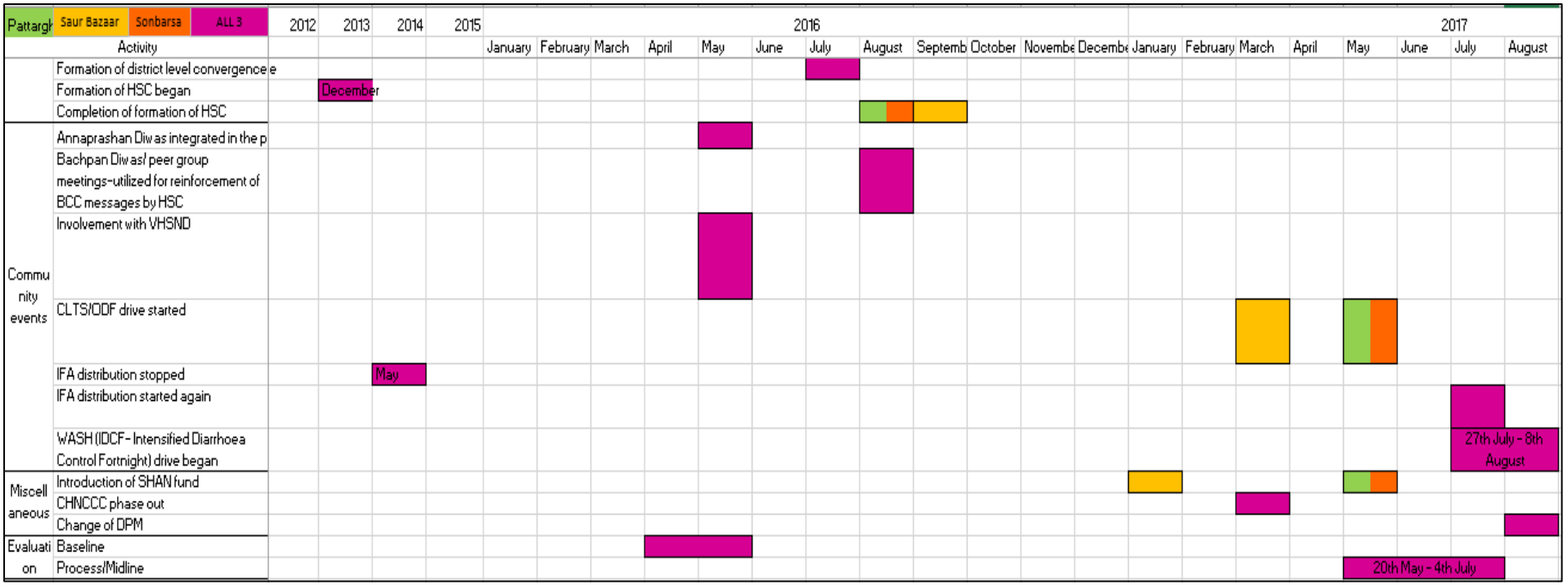

Figure A-1 Process Mapping of JEEViKA-MC pilot [2012-August 2017]

Table A.2: Comparison of maternal and child health and nutrition, IYCF practices, morbidity and family planning messages in the training manual with that of WHO manual

Topic (Roll out time)	JTSP training module	WHO training manual / ASHA training module	Comments
Linking health, nutrition and hygiene with livelihood	Importance of taking care of health and nutrition vis-à-vis savings and finance Cycle between poverty – weakness – sickness - expenditures Savings linked with health, nutrition and sanitation Services and service providers appointed by the Government at village level		Reviewed ASHA modules do not cover this topic.
May-June 2016	Short questions on pregnant women's diet, institutional delivery, immunization, complementary feeding and WASH.		
Antenatal care	First steps after pregnancy detection – registration, MCP card, ascertain expected date of delivery	How to detect pregnancy and calculate expected date of delivery	Both training modules cover the same topics under Antenatal care except the ASHA modules are more detailed and technical. The JTSP module doesn't include how to identify anaemia in a girl, pregnant woman or child. It also doesn't mention where the IFA tablets
July-August 2016	The MCP card is free of cost and records all services available to mother during pregnancy and to mother and child for the first 3 years after birth	Updating of maternal card	
	Necessary antenatal care (ANC) check-ups during pregnancy (4) and tests – BP, blood, urine etc. Attend VHSND every month for regular check-up.	4 ANCs including registration within first 3 months. Blood, BP and urine tests. Weight check.	
	Vaccination - TT	2 TT injections	
	Diet and eating habits – increase food intake,	Education of women on nutrition, rest and	

	small frequent meals, supplementary food from AWC, tricolour diet IFA – dosage and tips to avoid side effects	complete ANC services. Cereal, pulses, flesh food, vegetables, nuts, jaggery. Identification of anaemia in women and children and curative measures, IFA dosage and tips to avoid side effects, IFA at VHSND	can be procured.
Preparedness for complications September 2016	Signs of complications in pregnant women and necessary steps – Vaginal bleeding Reduced/ lack of movement of foetus Headache, dizziness, blurred vision Swelling of body parts, shortness of breath, palpitations Fits, convulsions Identifying which complications require consultation with ANM/doctor, which require hospitalisation Need for prompt action Save money for emergency and keep contact numbers of driver/ ambulance, ANM/ doctor	Signs of complications – Jaundice, high BP, fever or bleeding Protein and sugar in urine Swelling of feet, face and hands Vaginal bleeding Loss of foetal movement/ Severe abdominal pain Headache, dizziness, blurred vision Convulsions/ fits Signs for pregnant women who may need surgery or blood transfusion during delivery. Cases where women should opt for institutional delivery. How to handle non-severe emergencies such as night blindness, anaemia, burning when urinating, white discharge	The JTSP modules do not mention jaundice and high BP. The ASHA modules are understandably more technical in identifying women who need surgery/blood transfusion. They also list down non-severe emergencies which should be covered in JTSP too.
Birth preparedness	Preparations done before birth – identify Primary Healthcare Center/hospital, save	Identifying institution to which mothers which complications should be sent. Send	

	money for delivery/ emergency, contact numbers of ASHA/ANM, vehicle/ ambulance/ boatman, identify blood donor	mother to PHC/ sub-centre for delivery if there are no complications.	
October-December 2016	Importance and benefits of institutional delivery	Benefits of institutional delivery	
	Precautions/ steps in case of home delivery	ASHA brings ANM and assists in home delivery	
	Identify pregnant, lactating women and mothers of young children – who have to attend Bachpan Diwas, Annaprashan Diwas. Visit their homes if required. [For CM]	Ensure clean delivery space	
Nutritious diet for women Jan-March 2017	Importance of nutritious diet from adolescence Test nutrients in diet and supplements for adolescent girls, number of times married, pregnant and lactating women eat and food items in their diet – leftover of freshly cooked food Tri-colour food in every meal, do not give long gap between meals Benefits of – animal food, milk and related products, dark green leafy vegetables, yellow/orange fruits and vegetables Advised quantity of food intake Encourage use of FSF and kitchen gardens		The reviewed ASHA modules did not have a topic dedicated to the diet/ nutrition of the mother.
Early initiation of breastfeeding	Presence of family during labor – calming effect on mother	Start breastfeeding immediately after delivery – even before placenta is delivered,	Both modules speak about the importance

		benefits of breastfeeding for mother and child. Breastfeed 8-10 times in 24 hours	of starting breastfeeding within 1 hour and exclusive breastfeeding for first 6 months. The ASHA modules also contain information about problems related to breastfeeding such as cracked nipples/ engorgement and correct positions for breastfeeding.
	Start breastfeeding within 1 hour	Help mother to express milk and feed babies who cannot suckle at birth.	
April-May 2017	Exclusive breastfeeding for first 6 months	Emphasise exclusive breastfeeding - no water/ other liquids	
		More feeding leads to more milk generated – prevents child malnutrition	
	Linking ASHA to families	Manage breastfeeding problems (engorgement, sore, cracked, inverted nipple, mother feels she does not have enough milk)	
		Correct position for breastfeeding	
	VHSND attendance, ANM counselling	Identifying signs baby is not getting enough milk	
	Delayed clamping of cord		
	Skin-to-skin contact of child with mother after birth	Early skin contact helps in early secretion of breast milk	
	Colostrum – 1st vaccine	Colostrum protects against diseases	
Neonatal care	How to keep the baby warm – demonstration and advice -	Why keep baby warm and how, why they become cold	The ASHA modules also talk about preventing asphyxiation of newborn. In keeping a LBW baby warm, the ASHA module prescribes not bathing before 7 days and
	How to wrap the newborn	Prevent asphyxiation of baby	
	Cover head and feet, socks and caps for winters	Chances of underweight children getting sick	
April-May 2017	Not bathe first 6 days		
		Normal baby – bathe 2nd day, LBW baby – bathe after 7 days	
	Care of umbilical cord	Examining newborn at birth, weigh the newborn and keep umbilical cord dry and	

		clean, Home visits of newborn	JTSP says 6.
	Share information with non-SHG women	Dry baby, keep close to mother's chest and abdomen, layers of clothing and keep room warm.	
Post-partum complications April-May 2017	Symptoms of danger in mother – Excessive bleeding Foul vaginal discharge Pain/ infection in lower abdomen High fever, dizziness, fits	Symptoms of complications – Excessive bleeding Foul-smelling discharge/ infections Convulsions, swelling of face and hands, headache, blurred vision Anaemia Breast engorgement Perineal swelling and infection Mood changes	The ASHA modules list down more no. of possible complications in the mother which can be included in the JTSP as well. The ASHA modules also encourage intake of more food and fluids, especially protein to prevent complications in the mother and exclusive breastfeeding for the child.
	Symptoms of danger in newborn Fast breathing Convulsions Temperature (too hot/cold), not passed urine or stool 24-48 hours after birth Not able to feed Hands, feet, lips turning blue Body stiffness Bending of body like a bow		
	In case of any of the above situations, consult doctor or visit nearest PHC. Ensure all women who have a newborn to be visited by ANM/ASHA regularly Assist with money, accompany to PHC	Encourage more food and fluids – higher protein intake. Exclusive breastfeeding Home visits, recommended postnatal care visits	

Underweight and premature child April-May 2017	Symptoms of underweight – Birth weight < 2.5 kgs Delivery before 8.5 months Unable to suckle properly after birth Keep in touch with ASHA/ nurse Care – Wash hands before touching baby Not bathe first 6 days or until weight = 3 kgs Keep baby warm - wrapped in clean, dry clothes & kangaroo care. Keep head and legs covered. Only feed breast milk, 10-12 times during day & 4 times at night Feeding through clean bowl and spoon if necessary Don't put anything in eyes Keep umbilical cord clean and dry Age-appropriate vaccination	Symptoms – < 2 kg Delivery before 8.5 months Care – Cover with blanket and keep warm Don't bathe until weight = 2kgs Wash hands with soap before touching baby Breastfeed every 2 hours Feed using bowl and spoon if child not suckling milk	The modules differ on the level of birth weight below which a newborn is characterized at underweight.
Complementary feeding June-July 2017	Participants – SHG members and their family members with children aged 6-24 months Demonstration of cooking khichdi, ensure WASH practices of the cook, feed the khichdi to children aged 6-24 months Introduction of complementary food from 6 months along with breast milk as energy needs of child increases Tri-colour food in diet of child every day Wash hands with soap before cooking, before feeding and after feeding Spread the message and connect with ASHA, ANM	Prevents child malnutrition Consistency, quantity, (energy) density, frequency and variety – key points for complementary feeding Access to anganwadi services – supplementary food for child<5 years, weighing baby, Different food items	The JTSP modules adequately cover the topics of complementary feeding - the quantity of food the child should be fed at different ages, the importance of timely introduction and avoiding commercial food. However, assessing

	Importance of breast milk until 2 years If CF introduced early – loss of nutrients & antibodies from breast milk, possibility of diarrhoea If CF introduced late – increased risk of malnutrition Daily diet guidelines (6-24 months) – Quantity and frequency Tri-colour food Animal source food Breast milk Food consistency – semi-solid Avoid biscuits, commercial food No liquid before feeding, breastmilk after feeding How to feed a sick child		supplementary food from the AWC for lactating mother and child has not been mentioned under this topic.
Regular and complete vaccination TBA	Immunisation and immunisation card is free of cost. The card is given by the ANM VHSND – organised every month at AWC for immunisation Vaccination also done at – CHC/PHC/Hospitals/ private clinics Time period for following vaccines – TT1, TT2, BCG, OPV, Polio, Pentavalent 1 2 & 3, Hepatitis B, Measles, Vitamin A, DPT Booster. Benefits of BCG, Polio, Hepatitis B, Pentavalent, Measles, Vitamin A and booster dose	Full immunisation, vitamin A Access to Anganwadi services for full immunisation, Vitamin A (VHSND) Time periods for BCG, Polio, Measles and DPT.	The JTSP modules adequately cover the topic of immunisation.

Diarrhoea	Reasons for diarrhoea – Contaminated food/water Unhygienic living conditions		Both modules list down symptoms of diarrhea and its prevention. The ASHA module demonstrates preparation of ORS according to weight and age of child – this information can be incorporated by the JTSP. In case of treatment of diarrhea, the ASHA modules contain more medicinal knowledge which is astutely not a part of the JTSP modules.
TBA	Symptoms of diarrhoea – Watery/ thin stool - 3 or >3 times / day Child appears weak and dull Presence of blood in stool Child loses consciousness Lack of water intake Pinched skin Sunken eyes	Symptoms – Stools 3 or >3 times / day, watery Blood in stool (dysentery) Lethargic, restless Sunken eyes Pinched skin Not being able to drink water	
	How to care for children suffering from diarrhoea - Consult ANM/ ASHA, take child to PHC/ hospital if danger signs Oral rehydration Salts (ORS) and zinc tablets from AWC Exclusive breastfeeding for first 6 months If child <6 months, breastfeed frequently, if child>6 months then give ORS along with breast milk frequently.	Feeding during illness Access to health services – hospital if >14 days ORS One tablet of Albendazole for deworming once in six months - For a child under two years, give half a tablet of Albendazole Cotrimoxazole 1 tablet/day (for dysentery)	
	Prevention of diarrhoea – Keep surroundings clean Wash hands with soap after using toilet, before cooking meals and feeding child	Safe drinking water, wash hands with soap before cooking and feeding and after defecation,	
	Demonstrate dehydration in children due to diarrhoea	Demonstrate administration of ORS, amount according to weight of child	
	SHG members should spread information on diarrhoea to all parents		

Pneumonia TBA	Symptoms of pneumonia – Coughing, wheezing, difficulty in breathing, chest in-drawing If child <1 year and breathes >=50 times/ minute If child >=1 and <5 years and breathes >= 40 times/ minute High fever and wet cough with yellow-green sputum High fever with chills Stabbing chest pain Dehydration due to excessive sweating Severe pneumonia – cough for > 2 days, fatigue and dizziness, inability to eat or drink, respiratory distress, blue lips and/or nails How to care for children suffering from pneumonia – Take child to nearest PHC/ hospital Consult ASHA – count child's breaths/ minute Prevention of pneumonia – Keep child away from smoke, ensure smoke while cooking doesn't enter house Wash hands with soap before cooking and feeding the child and after using toilet Keep child warm Ensure routine immunization	Symptoms – Cough or difficulty in breathing Chest indrawing Count breaths per minute (same as JTSP) Feeding during illness – breastfeed more, give more fluids Access to health services Tepid water sponging to reduce fever, give paracetamol if >2 months when fever is high Cotrimoxazole if severe For cold - clean nose, breastfeed frequently, give more fluids Prevent illness – handwashing, boiling drinking water, full immunisation, Vitamin A, avoid persons with infection	Both modules adequately cover symptoms of pneumonia and how to prevent it. Information on the treatment of pneumonia is more technical in case of the ASHA modules but a suggestion that the JTSP modules can incorporate is tepid water sponging to reduce fever and to feed the child more especially during cough/cold.

	Food and nutrition		
Post-partum Family planning TBA	Methods of post-partum family planning – permanent/ temporary - tubectomy, copper-T/ IUCD Dispel myths about the methods – weakness after tubectomy, side effects from copper-T Dissemination of message to non SHG women Linking with ASHA, ANM for counselling	Encourage spacing of children of health of mother and child, caution against risk of unprotected sex Access to contraceptive services	Both modules sufficiently explain the need for family planning and the methods available.
Family planning TBA	Legal age of marriage of men and women, minimum age for first child - 20 Family planning – free of cost – government hospitals Temporary methods – condom, contraceptive pills, copper-T, contraceptive injection Permanent methods – female and male sterilization Number of children and gap between children should be pre-determined, don't increase children for sons Benefits of family planning – financial, nutrition and education of children, women health Dispelling of myths – pills don't cause weakness, condoms are reliable if used properly, Duration of effect of different methods and how	Information on where to access contraceptive services Abortion – types, legality, post abortion care Provide condoms, contraceptive pills, emergency contraceptive pills Information on use and compensation from sterilization and IUCD Side effects of different methods – OCP & IUCD, when women should not take pills/ IUCD	The JTSP modules provide information of different family planning methods but could also include the following – the importance of family planning for mother and child's heath & nutrition, the side effects associated with some of the methods, which women should exercise greater caution in use of these methods and information about abortion.

to administer – IUCD, injectable, contraceptive pill, condom, LAM, emergency contraceptive pills,

Table A.3: Description of indicators and how they were calculated

S. No.	Indicator	Description
1	CM is aware when HRF should be used	The CM was narrated a hypothetical situation of an SHG member whose husband is unwell and she needs money for his treatment. In case the CM recommended application for HRF in this context or if she didn't but when she was explicitly asked if she would advise HRF in this context and she said yes, then the CM was considered to be aware.
2	CM is aware when FSF should be used	The CM was narrated a hypothetical situation of an SHG member who was pregnant and did not have access to essential food grains. In case the CM recommended purchase of grains through FSF in this context or if she didn't but when she was explicitly asked if she would advise use of FSF in this context and she said yes, then the CM was considered to be aware.
3	CM is aware when Kitchen Gardens should be promoted	The CM was narrated the same story of the pregnant SHG member with the caveat that she needs to improve her diet diversity but vegetables in the market are very expensive. In case the CM recommended cultivation of kitchen gardens for self-consumption in this context or if she didn't but when she was explicitly asked if she would advise uptake of kitchen gardens in this context and she said yes, then the CM was considered to be aware.
4	CM is aware of initiation of breastfeeding	The CM was marked aware if when asked how long after birth should a baby start breastfeeding, she responded either "immediately after birth" or "less than one hour".
5	CM is aware of duration of exclusive breastfeeding	The CM is aware if – a. when asked what should an infant under 6 months be fed she responded either "Breast milk only" or "Breast milk, ORS, syrups, and medicine" AND b. when asked about duration of exclusive breastfeeding she answered "6 months" AND c. when asked if babies under 6 months should be fed water if the weather is hot, she responded "No".
6	CM is aware of benefits of exclusive breastfeeding	The CM is marked aware if when asked about the benefits of exclusive breastfeeding she mentioned any of the following reasons: "Protects baby from illness", "Helps baby grows better", "breast milk contains everything a baby needs for the first 6 months" or "breast milk is safe, clean and convenient".
7	CM is aware of timely initiation of complementary food	CM was considered aware if she responded that water, rice, bread, legume, green leafy vegetables, other vegetables (eg. Pumkin, orange, carrot, sweet potato), fruits, meat, egg, milk and nuts should be introduced between the age of 6 and 8 months (inclusive) in young children's diet and for introduction of purchased snack foods, mentioned any time after completion of 5 months.

Table A.4: CM knowledge of WASH related practices

	Treatment arm (N=14)	Control Arm (N=12)	All (N=26)
	Count	Count	Count
Benefits of keeping surroundings clean			
It keeps us healthy/ we do not dall sick	14	12	26
Source of funds for toilet construction			
JEEViKA-SHAN fund	6	6	12
Nirmal Bharat Abhiyan	0	1	1
Other	5	7	12
Don't Know	3	0	3
Government	2	1	3
Disposal of young child's stool			
Flush down toilet/latrine	3	5	8
Rinse into drain/ditch	3	3	6
Bury	6	5	11
Leave in the open	4	4	8
Other	0	1	1
Before eating	5	9	14
After using the toilet	6	4	10
before feeding a child	9	4	13
After cleaning a child who has defecated	9	7	16
Before preparing food	8	4	12
Before touching a newborn baby	3	3	6
Materials used for handwash			
Water	0	0	0
Soap	14	12	26
Ash	1	2	3
Other	0	1	1
Sand	1	2	3

Source: Authors' calculations.

Table A.5: CM knowledge of antenatal care

	Treatment arm (N=14)	Control Arm (N=12)	All (N=26)
	Count	Count	Count
Desired frequency of antenatal check-ups			
At least 4 times during pregnancy	6	2	8
Other	5	6	11
Don't Know	0	1	1
Once a month	3	4	7
Services provided under ANC			
IFA tablets or syrup	7	4	11
Blood pressure checkup	4	0	4
Weight gain monitoring	7	1	8
Blood test	2	0	2
Tetanus injections	5	3	8

Other	1	2	3
Don't Know	1	5	6
vaccination	2	1	3
Vaccination for pregnant women			
T.T. injections	5	4	9
Don't Know	4	5	9

Source: Authors' calculations.

Table A.6: CM knowledge of iron deficiency and anemia

	Treatment arm (N=14)	**Control Arm (N=12)**	**All (N=26)**
	Count	**Count**	**Count**
Number of IFA tablets pregnant woman should take	146.14 (55.34)	92.22 (47.11)	125.04 (57.8)
Number of IFA tablets that should be taken in one day	1.07 (0.27)	1.1 (0.32)	1.08 (0.28)
Source of IFA tablets			
ANM	1	1	2
Anganwadi Centre	8	8	16
Health Centers	5	5	10
Pharmacy	7	2	9
ASHA	4	3	7
Side effects associated with IFA			
Nausea	6	1	7
Constipation	2	0	2
Darkening of stool	3	0	3
Abdominal discomfort	1	0	1
Other	3	2	5
Don't Know	0	7	7
No side effects	5	2	7
Anemia symptoms			
Less energy/weakness	2	6	8
Paleness/ pallor (pale color in eyes and palm)	10	7	17
Other	2	2	4
Don't Know	0	2	2
Swelling	4	1	5
Causes of anemia			
Lack of iron in the diet/ eat too little, not much	13	9	22
Sickness/infection (malaria, other infection such as HIV/AIDS)	1	1	2
Other	0	1	1
Don't Know	1	1	2
Develop anemia/less iron in blood	1	1	2
Difficult delivery	1	4	5
Risk of dying during or after pregnancy	5	1	6
Other	10	6	16

Don’t Know	0	1	1
Health of the child can be in danger	0	1	1

Source: Authors’ calculations.

Table A.7: CM knowledge of care during pregnancy

	Treatment arm (N=14)	Control Arm (N=12)	All (N=26)
	Count	**Count**	**Count**
What should the family of a pregnant woman do if she experiences…			
A. Burning sensation or pain during urination			
Take her to the ANM	1	0	1
Take her to the ASHA	0	0	0
Take her to the hospital	12	8	20
Make her rest	0	1	1
Do nothing	0	0	0
Other	0	1	1
Don’t Know	1	1	2
Give medicine	0	1	1
B. Vaginal bleeding			
Take her to the hospital	14	10	24
Make her rest	0	1	1
Don’t Know	0	1	1
C. Headache and blurred vision			
Take her to the hospital	14	11	25
Make her rest	1	1	2
D. Fever			
Take her to the ASHA	0	1	1
Take her to the hospital	14	12	26
Other	1	1	2
E. Shortness of breath or fits			
Take her to the hospital	14	11	25
Make her rest	0	1	1
Don’t Know	0	1	1

Source: Authors’ calculations.

Table A.8: CM knowledge of breastfeeding practices

	Treatment arm (N=14)	Control Arm (N=12)	All (N=26)
	Count	**Count**	**Count**
When should baby start breastfeeding			
Immediately after birth	0	5	5
Less than one hour	13	0	13
Some hours after, but less than 24 hours	1	5	6
More than one day after	0	1	1
Don’t Know	0	1	1
What to do with colostrum			

Throw it away and start breastfeeding when the real milk comes in	1	2	3
Give it to her baby by breastfeeding soon after birth	13	9	22
Other	0	1	1
What can a baby under the age of 6 months be fed			
breast milk only	14	11	25
Breast milk and any other milk substitutes	0	2	2
Number of months child should be exclusively breastfed	6.07 (0.27)	6.25 (2.01)	6.15 (1.35)
Frequency of breastfeeding			
Whenever baby wants	2	2	4
When you see the baby is hungry	3	2	5
When the baby cries	5	3	8
At least 10-12 times a day	2	2	4
Other	6	4	10
Don't know	1	1	2
Reasons for exclusive breastfeeding			
Protects baby from illness	10	4	14
Helps baby grow better	4	3	7
Breast milk contains everything a baby needs for the first six months	2	0	2
Breast milk is clean, safe, convenient	3	3	6
Other	3	3	6
Don't Know	0	2	2
Until what age should a baby be breastfed (months)	23.57 (19.61)	14.73 (8.64)	19.68 (16.11)
What should mother do when unable to produce enough milk			
Breastfeed more frequently	9	1	10
Give baby other liquids/foods	1	7	8
Mother needs to eat more food	5	2	7
Mother needs to eat food that increases milk production	2	2	4
Other	2	3	5
Don't Know	0	1	1
Mother should feed in a relaxed manner	2	0	2
What should the baby be fed in mother's absence			
Cow's milk	4	10	14
Packet milk	1	0	1
Other	9	3	12
Pregnant mother should stop breastfeeding			
Yes	4	9	13
No	8	2	10
Don't Know	2	1	3

Source: Authors' calculations.

Table A.9: CM knowledge of immunization

	Treatment arm (N=14)	**Control Arm (N=12)**	**All (N=26)**
	Count	**Count**	**Count**
Diseases that immunization protects from			
Tetanus	1	1	2

Polio	12	11	23
Diphtheria	1	0	1
Whooping cough kaali khasi	2	1	3
Measles	2	1	3
TB	1	1	2
Hepatitis B	2	1	3
Cost of immunization	30 (28.28)	60 (56.67)	45 (40.41)
CMs who think immunization is free	12	6	18
Every time a new vaccination is provided	9	9	18
At least once a month	4	2	6
Less than once a month but at least once every six months	1	0	1
Don't know	0	1	1

Source: Authors' calculations.

Table A.10: CM's knowledge comparison between Baseline and Process Evaluation

Question	Treatment (Count/Mean)		Control (Mean/Count)	
	Baseline	**P.E.**	**Baseline**	**P.E.**
Benefits of keeping one's surroundings clean	**N=13**		**N=10**	
It keeps us healthy, and we can work better and for longer periods of time	5	13	1	10
It keeps us healthy/ we do not fall sick	1	0	1	0
It improves the image of our village	6	0	7	0
We can work better and for longer	1	0	1	0
We do not fall sick	0	0	0	0
Our children grow properly and perform better at school	0	0	0	0
No benefits	0	0	0	0
Source of funds for toilet construction for households				
JEEViKA // JEEViKA-SHAN fund	2	5	5	5
Nirmal Bharat Abhiyan	8	0	2	1
Other NGO	0	0	0	0
Friends/family	0	0	1	0
MGNREGA	0	0	1	0
Disposing young child's stools				
Flush down toilet/latrine	4	3	3	3
Rinse into drain/ditch	3	2	1	2
Bury	1	6	5	5
Leave in the open	4	4	1	3
Materials used to wash hands				
Water	8	0	5	0
Soap	13	13	10	10
Ash	4	1	5	1
Soap/Ash	1		0	
None	0	0	0	0
Sand		1		1
	N=13		**N=10**	**N=7**
How many IFA tablets should be taken during pregnancy (N=13, 13, 10, 7)	90.77	144.31	71	91.43
Side effects associated with IFA tablets	**N=12**	**N=13**	**N=10**	
Nausea	3	6	4	0
Constipation	1	2	1	0
Darkening of the stool	3	3	1	0
Abdominal discomfort	0	1	0	0
How should family be prepared for delivery	**N=13**		**N=10**	
Keep the ASHA and ANM didi's number handy	10	9	6	1
Identify a hospital for delivery	1	5	3	0
Have enough money saved to pay for medicines/delivery charges if any	1	9	1	6
Have a Disposable Delivery kit ready (Mamta kit)		0		0
Have someone to accompany them		3		0
Keep the number of the ambulance readily accessible		9		4
Keep clean cloth, clean blade etc readily accessible		7		7

When should breastfeeding begin				
Immediately after birth	11	0	5	4
Less than one hour	2	12	5	0
Some hours after, but less than 24 hours	0	1	0	4
One day after	0	0	0	0
More than 1 day after	0	0	0	1
What should mother do with colostrum				
Throw it away and start breastfeeding when the real milk comes in	0	1	0	2
Give it to her baby by breastfeeding soon after birth	13	12	10	7
What to feed baby under 6 months				
Breast milk only	12	13	7	9
Breast milk and water	0	0	1	0
Breast milk, ORS, syrups, and medicine	1	0	0	0
Breast milk and any other milk substitutes	0	0	2	2
Should baby under 6 months be given water in hot weather				
Yes	4	1	4	8
No	0	12	0	1
Duration of exclusive breastfeeding	6.15	6.08	8.8	6.3
Frequency of breastfeeding				
Whenever baby wants	10	2	5	2
When you see the baby is hungry	4	3	5	1
When the baby cries	5	4	8	2
At least 10-12 times a day	2	2	0	2
At least 4 times during the night	0	0	0	0
Reasons for exclusive breastfeeding				
Protects baby from illness	9	9	5	3
Helps baby grow better	6	4	1	2
Breast milk contains everything a baby needs for the first six months	5	2	4	0
Mother less likely to get pregnant	4	0	0	0
Delays return of mother's monthly bleeding	0	0	0	0
Breast milk is clean, safe, convenient	3	3	1	3
Breast milk is affordable	1	0	0	0
Reduces health care costs	0	0	0	0
	N=11	**N=13**	**N=10**	**N=9**
Age until which breastfeeding should continue	19.73	24.46	24	16
If mother can't produce enough breast milk	**N=13**		**N=10**	
Breastfeed more frequently	4	8	1	1
Give baby other liquids/foods	6	1	3	7
Mother needs to drink more water	1	0	1	0
Mother needs to eat more food	8	4	4	1
Mother needs to eat food that increases milk production	2	2	4	1
Mother should feed in a relaxed manner		2		0
Feeding baby under 6 months in mother's absence				
Mother's expressed breast milk	1	0	0	0

Cow's milk	11	4	9	9
Semolina/Flour	1	0	0	0
Horlicks		0		0
Packet milk		1		0
Should mother stop feeding if she is pregnant				
Yes	4	3	2	7
No	2	8	1	2
When should mother / caregiver wash hands				
Before eating	11	4	9	7
After using the Toilet	10	5	9	4
Before feeding a child	7	8	6	3
After cleaning a child who has defecated	6	8	5	6
Before preparing food	6	7	5	3
Before touching a newborn baby	1	3	4	2
Before applying oil to the child		0		0
Immunization card is free	4	11	7	5
How often immunization card should be updated				
Every time a new vaccination is provided	6	9	6	7
At least once a month	0	3	1	2
Less than once a month but at least once every six months	0	1	0	0
Once a year	0	0	0	0
Vaccinations pregnant woman should receive	**N=13**	**N=8**	**N=10**	**N=8**
Tetanus injections	11	5	5	3
Introduction of complementary food				
Water **(N=12,13,8,9)**	6.17	10.38	6.5	4.67
Rice, Bread, Pressed rice, chudda etc. **(N=13,13,8,9)**	5.77	6.62	7.13	7.11
Legume: daal **(N=13,13,8,10)**	6.54	6.31	7	7.4
Green leafy vegetables **(N=11,13,8,9)**	6.55	8.23	7.13	10.22
Vegetables such as pumpkin, orange yam, carrots, tomato, sweet potato **(N=12,13,8,9)**	7.42	9.54	7.5	16.67
Fruits such as banana, papaya, mango **(N=13,13,8,10)**	6.31	10	7.63	22
Meats such as chicken, mutton, fish, etc. **(N=13,13,7,10)**	13.31	13.08	7.71	30.6
Eggs **(N=13,13,7,10)**	8.38	11.46	7.57	31.3
Milk (cow, goat or powdered) **(N=12,13,9,10)**	5.58	5.85	7.33	4.2
Peanuts, ground nuts and other nuts **(N=0,13,0,9)**		12.38		21.22
Purchased snack foods (chips, chocolates) **(N=0,12,0,10)**		11.92		34.7
Foods rich in iron	**N=13**		**N=10**	
Green leafy vegetables	5	7	7	5
Sugar	2	0	0	0
Liver, kidney and heart		1		0
Meats such as chicken, mutton, fish, etc.	3	5	0	1
Milk	10	6	3	5
Yoghurt	2	1	2	1
All types of lentils	2	0	2	4
Fruits such as banana, papaya, mango	4	5	2	4
Foods rich in Vitamin A				

Orange colored fruits/vegetables	5	9	4	5
Green leafs	2	4	1	2
Eggs	7	1	4	1
Liver	0	0	0	0
Breast milk	3	1	2	0
Cow's milk	0	2	2	6
Foods that make bone stronger				
Milk and milk products	7	6	5	5
Green leafy vegetables	4	1	2	5
Meat products	6	6	2	2
Change in food consumption of pregnant women	**N=9**	**N=13**	**N=6**	**N=10**
Eat less than normal	0	3	1	1
Eat as much as normal, no change	0	0	0	1
Eat more than normal	8	4	5	0
	N=9	**N=13**	**N=6**	**N=10**
More fruits and vegetables	9	4	5	4
More milk, meat, eggs and fish	1	7	1	3
Eat foods with at least 3 colours – orange, green and white	0	4	1	2
Eat small meals at frequent intervals		4		0

Source: Authors' calculations.

Table A.11: Households' knowledge comparison between Baseline and Process Evaluation

	Treatment (Proportion/Mean)		**Control (Proportion/ Mean)**	
Question	**Baseline**	**PE**	**Baseline**	**PE**
At what age should a child be given the following foods (in months)				
a. Water **(N=285, 286, 258, 266)**	5.02	5.46	5.1	5.35
b. Rice, bread, pressed rice, chivda etc **(N=286,286,262,266)**	7.37	7.2	6.55	7.27
c. Legumes, daals **(N=286, 286, 263,266)**	6.67	7.03	6.48	7.13
d. Green leafy vegetables **(N=286,285,261,266)**	7.98	8.98	7.34	9.27
e. Vegetables such as pumpkin, orange yam, carrots, tomato, sweet potato **(N=282,282,257,264)**	8.04	10.61	7.66	11.08
f. Fruits such as banana, papaya, mango **(N=285,265)**		10.92		11.51
Papaya or mango **(N=281,258)**	7.75		7.48	
Bananas **(N=283,261)**	7.94		7.31	
g. Meats such as chicken, mutton, fish, etc **(N=281,257)**		16.75		17.16
Meat **(N=242,238)**	15.26		13.52	
Chicken, duck, other poultry **(N=240,239)**	15.22		13.62	
Fish **(N=245,240)**	15.18		13.44	
h. Eggs **(N=238,280,239,258)**	12.67	16.43	11.93	15.89
i. Milk (cow, goat or powdered) **(N=267,285,252,265)**	9.14	6.11	9.22	6.15
j. Peanuts, ground nuts and other nuts **(N=280,283,262,260)**	5.84	12.86	5.83	12.97

k. Purchased snack foods (chips, chocolates) **(N=279,284,259,265)**	7.76	9.99	7.29	10.43
l. Kurkure, maggi, biscuits **(N=285,265)**		9.16		9.37
	N=286		**N=266**	
Proportion who know about early initiation of breastfeeding	84.27	79.72	76.32	80.45
Proportion who know to feed child colostrum	72.03	77.97	78.57	72.56
How often should a baby breastfeed?				
Whenever baby wants	43.01	28.32	47.74	18.42
When you see the baby is hungry	29.02	51.05	21.05	65.04
When the baby cries	23.08	72.03	21.43	80.45
At least 10-12 times a day		9.09		4.51
At least 4 times during the night		2.45		0.75
If a mother thinks her baby is not getting enough breast milk, what should she do?				
Breastfeed more frequently	20.98	3.49	12.41	2.02
Give baby other liquids/foods	26.92	15.5	23.68	16.53
Mother needs to drink more water	2.45	1.55	7.52	1.61
Mother needs to eat more food	23.78	52.33	27.82	52.42
Mother needs to eat food that increases milk production **(N=258, 248)**		60.85		63.71
Give other animals milk	5.24		1.5	
Infant under 6 months of age should be given water (sometimes vs hot weather)	31.47	13.64	39.47	8.65
Should mother stop breastfeeding child under 6 mo if she is pregnant	47.9	38.81	45.86	24.81
What should child under 6 mo be fed in mother's absence	**N=275**	**N=286**	**N=249**	**N=266**
Mother's expressed breast milk	5.09	3.15	9.64	2.63
Cow's milk	95.64	93.01	95.98	94.74
Semolina/Flour		0.35		0
Horlicks		0.35		1.88
Packet milk		12.24		15.04
Cerelac		2.1		1.88
Gruel	3.64		4.02	
Solid food	2.18		2.01	
Reasons for exclusive breastfeeding	**N=286**		**N=266**	
Protects baby from illness	71.68	50.35	67.29	43.23
Helps baby grow better	36.71	72.03	35.34	79.7
Breast milk contains everything a baby needs for the first six months	4.55	2.1	4.51	1.88
Mother less likely to get pregnant	6.64	0	2.63	0
Delays return of mother's monthly bleeding	1.4	0.35	0.75	0
Breast milk is clean, safe, convenient	3.15	7.69	1.13	3.76
Breast milk is affordable	11.54	4.9	18.05	4.14
Reduces health care costs	0.7	4.9	0.75	4.14

Until at least what age should a baby be breastfed (mean in months)? (N=283,284,265,265)	15.31	20.64	17.32	21.67
When should caretaker of a young child wash hands?	**N=286**		**N=266**	
Before eating	62.59	61.19	63.16	51.13
After using the Toilet	35.66	60.49	45.49	58.27
Before feeding a child	37.41	60.84	40.6	63.16
After cleaning a child who has defecated	13.64	83.57	18.05	83.08
Before preparing food	12.24	26.92	21.43	17.67
Before touching a newborn baby		5.24		4.89
After working in the fields		7.69		6.02
After cooking		13.29		10.9
Why is proper nutrition of pregnant women important?				
Maintaining the health of herself and her child		90.91		89.85
For adequate weight gain of pregnant woman	40.56	42.66	42.86	38.72
For a brainy child with bright future	11.89	1.05	16.92	3.01
Quicker recovery after delivery	16.78	8.39	10.9	7.52
Extra costs due to doctors and medicine will be saved	1.4	1.4	3.01	0
It is a good investment in future	2.8	2.8	8.27	5.64
Other	46.5	0.35	40.98	0.75
How should pregnant woman eat I comparison to non-pregnant woman				
Eat less than normal		61.89		63.91
Eat as much as normal, no change	37.76	5.24	32.71	6.77
Eat more than normal		29.72		21.8
More fruits and vegetables		26.57		36.84
More milk, meat, eggs and fish (animal source foods)		28.32		36.09
Eat foods with at least 3 colours – orange, green and white		6.99		5.64
Eat more frequently	16.43		19.92	
Eat more protein rich foods	14.34		17.67	
Eat more iron rich foods	12.24		13.16	
Use iodized salt when preparing meals	1.75		1.88	
Symptoms of anemia	**N=155**	**N=286**	**N=153**	**N=266**
Less energy/weakness	83.87	61.54	93.46	66.17
Paleness/ pallor (pale color in eyes and palm)	41.29	68.88	40.52	76.69
Spoon nails/bent nails	2.58	3.15	12.42	5.64
More likely to become sick (less immunity to infections)	12.9	2.1	3.27	0.75
Health risks for pregnant woman from lack of iron				
Develop anemia/less iron in blood	56.13	15.03	54.25	15.04
Difficult delivery	34.84	70.98	45.1	66.17
Risk of dying during or after pregnancy	9.68	18.88	7.19	17.67
Child becomes weak		45.45		40.23
Causes of anemia				
Lack of iron in the diet/eat too little, not much	73.55	86.01	72.55	88.72
Sickness/infection (malaria, hookworm infection, other infection such as HIV/AIDS)	9.03	12.94	15.03	12.03

Heavy bleeding during menstruation	9.03	4.2	5.88	3.38
Foods rich in iron	**N=286**		**N=266**	
Green leafy vegetables	33.57	58.74	36.84	57.52
Sugar		0		0.38
Organ meat (liver, kidney, heart…)	17.83	3.15	13.16	3.01
Flesh meat (beef, pork, lamb, goat, chicken…)	6.64	3.15	12.03	3.01
Insects (insect larvae, red ants…)	1.4		3.38	
Fish and seafood	8.04		20.3	
Milk		61.89		69.92
Yogurt		22.38		25.19
All types of lentils		23.08		30.83
Fruits		57.69		62.41
IFA tablets pregnant woman should take (in 1 month vs during pregnancy) (N=174,286,155,266)	44.95	8.26	37.46	24.15
Foods rich in Vitamin A	**N=286**		**N=266**	
Orange colored fruits/vegetables		64.34		64.29
Orange coloured vegetables	5.24		13.16	
Green leafs	21.33	34.62	25.94	31.95
Orange or yellow fruits	15.03		18.05	
Eggs		2.8		4.14
Liver		0.35		0.75
Breast milk		3.15		1.88
Cow's milk		53.85		62.78
Red palm oil	4.55		4.89	
Food fortified with Vit A	2.45		1.88	
Organ meat (liver, kidney, heart…)	8.74		7.89	
Egg yolks from chicken, duck, fowl	3.85		4.14	
Milk cheese or other dairy product	1.75		4.51	

Source: Authors' calculations.