MATHEMATICA Policy Research

REPORT

Using Supply- and Demand-Side Strategies to Improve Maternal and Child Health in Bihar, India: Process Evaluation Findings

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ACRONYMS

ANC	antenatal care
ASHA	accredited social health activist
AWC	anganwadi center
AWW	anganwadi worker
ANM	auxiliary nurse midwife
BCM	block community mobilizer
BHM	block health manager
CDPO	child development project officer
CS	civil surgeon
DHS	District Health Society
DPM	district program manager, NRHM
DPO	district program officer, ICDS
DQAC	district quality assurance cell
FAT	Facility Assessment Tool
FGD	focus group discussion
GoB	Government of Bihar
ICDS	Integrated Child Development Services
ICT	information communication technology
IFA	iron/folic acid
IFHI	Integrated Family Health Initiative
IPC	interpersonal communications
ISO	International Organization for Standardization
IVR	interactive voice response
LHV	lady health visitor

LQAS lot quality assurance sampling

MIS management information systems

MLE measurement, learning, and evaluation

MNCH maternal, neonatal, and child health

MO medical officer

MOIC medical officer-in-charge

NRHM National Rural Health Mission

ORS oral rehydration salts

PHC primary health center

QI quality improvement

RKS Rogi Kalyan Samiti

RMNCH+A reproductive, maternal, newborn, child, and adolescent health

SBA skilled birth attendant

SDP Shaping Demand and Practices to Improve Family Health in Bihar Initiative

SHS State Health Society

TBGI team-based goals and incentives

THRs take-home rations

TSU technical support unit

TT tetanus toxoid

VHND Village Health and Nutrition Day

EXECUTIVE SUMMARY

In 2010, the Bill & Melinda Gates Foundation created the Family Health Initiative, now known as the Ananya program, as part of a flagship effort to reduce maternal, newborn, and child mortality; fertility; and undernutrition rates in Bihar, India. Its six complementary grants adopt both supply- and demand-side strategies to improve service coverage and uptake across the continuum of family health, which includes maternal, neonatal, and child health (MNCH); reproductive health; and nutrition. In its first two years, the Ananya initiative was implemented in eight focus districts in western and central Bihar. The foundation and its partners are now scaling up select interventions to the rest of the state, where it is envisioned that government staff will assume responsibilities from Ananya implementers.

As part of its measurement, learning, and evaluation (MLE) efforts, Mathematica Policy Research conducted a process study to understand and explore how program activities were implemented. The main goals of the study were to gather information on the main successes and challenges associated with implementation and elicit lessons related to the sustainability of key interventions. These findings can help inform decision making related to program improvement and scale-up as well as the findings of our impact analysis.

This report focuses on the findings from our process study of two early Ananya grants: (1) the Integrated Family Health Initiative (IFHI), led by CARE; and (2) Shaping Demand and Practices to Improve Family Health in Bihar (SDP), led by BBC Media Action. We focused on these two grants because their activities had begun earlier than other grants and had had time to take root. Next, we offer additional detail on the interventions, describe the data collection for the study, and summarize key findings.

A. The IFHI and SDP grants

The IFHI and SDP grants aim to influence the demand and supply side factors related to maternal and newborn child health at the community and facility levels. Three main types of community outreach interventions have been rolled out in the eight focal districts, including (1) efforts to improve the enumeration and mapping of frontline worker (FLW) catchment areas, so that all potential beneficiaries are identified and linked to FLWs; (2) training and tools for FLWs to improve their technical knowledge, communication skills, and ability to plan and track home visits and services; and (3) mass media and community-mobilization efforts to deliver family health messages directly to households. At the facility level, IFHI has worked mainly with primary health centers (PHCs), which are clinics that perform deliveries and basic surgical procedures at the block level. It initiated at these facilities (1) a quality improvement (QI) process, as part of which PHC staff conduct at their institution a structured assessment of infrastructure, equipment, supplies, and other resources, and identify and develop a plan to address gaps and shortages; and (2) on-site skills trainings to nursing staff who conduct deliveries and provide newborn care. All intervention activities are listed in Figure 1.

Enumeration and mapping. One of the FLWs based at the community level, the anganwadi worker (AWW), is responsible for collecting and maintaining basic demographic information on each household in the catchment area of her anganwadi center. IFHI's assessments showed, however, that survey registers and, accordingly, the FLWs' service

coverage, frequently excluded a number of households in the catchment area. That is, households with eligible beneficiaries—pregnant women, lactating mothers, and young children—were not being served by the AWW, or the accredited social health activist (ASHA), who is also linked to the anganwadi center. IFHI sought to address this issue with a two-step process: first, identifying these left-out households using secondary data and survey register information and, second, ensuring that these households were then incorporated into FLW catchment areas.

Figure 1. IFHI and SDP interventions

Community-level activities	**Targeting frontline workers**	Enumeration and Mapping (IFHI)	Identification of households that are not linked to ASHAs and AWWs and their integration into FLW catchment areas; training for FLWs on how to more accurately collect enumeration information
		Subcenter Platform (IFHI)	Training to improve FLWs' technical knowledge and their ability to plan and manage home visits and other services
		Mobile Academy (SDP)	Interactive voice response (IVR)-based course on family health care
		IPC Trainings and Mobile Kunji (SDP)	Training (and an interactive mobile phone-based tool) to improve FLW interpersonal communications with households
	Targeting households	*Khirki Mehendiwali* Radio Program (SDP)	Long-format radio series that chronicles the life of a young girl named Mehendi and through her story illustrates important family health behaviors
		TV Advertisements (SDP)	Television advertisements relaying messages related to birth spacing and birth preparation
		Community Mobilization (SDP)	A mobile van campaign to broadcast the birth-preparation advertisement in communities with limited TV access
		Kilkari Family Time Line Service (SDP)	A system through which families register to receive calls informing them about critical practices to follow at crucial junctures during pregnancy and early childhood
Facility-level activities	**Targeting PHC staff**	Quality Improvement (IFHI)	A facility assessment to identify gaps in resources and infrastructure and the development of a corresponding action plan
		Skills Trainings (IFHI)	Skills trainings on delivery and newborn care for ANMs and nurses

Training and tools to improve FLWs' knowledge of technical family health information. At the core of IFHI's work at the community level is the subcenter platform. To ensure that FLWs have a more accurate and comprehensive understanding of the critical maternal and child health, immunization, reproductive health, and hygiene and sanitation practices that pregnant women and new mothers should follow, IFHI provides monthly trainings on these topics to ASHAs and AWWs at each subcenter, the lowest-tier public health facility that covers several anganwadi center catchment areas and is staffed by an auxiliary nurse midwife

(ANM). IFHI began by hiring a team of block-level staff to facilitate these meetings, with the goal of transitioning this role to the ANMs leading the subcenters as the program scaled up across the state. In addition to the subcenter platform, the Ananya program also gives FLWs the opportunity to access refresher training at their convenience. SDP has developed an audio training course called Mobile Academy that is delivered via mobile phone-based integrated voice response technology.

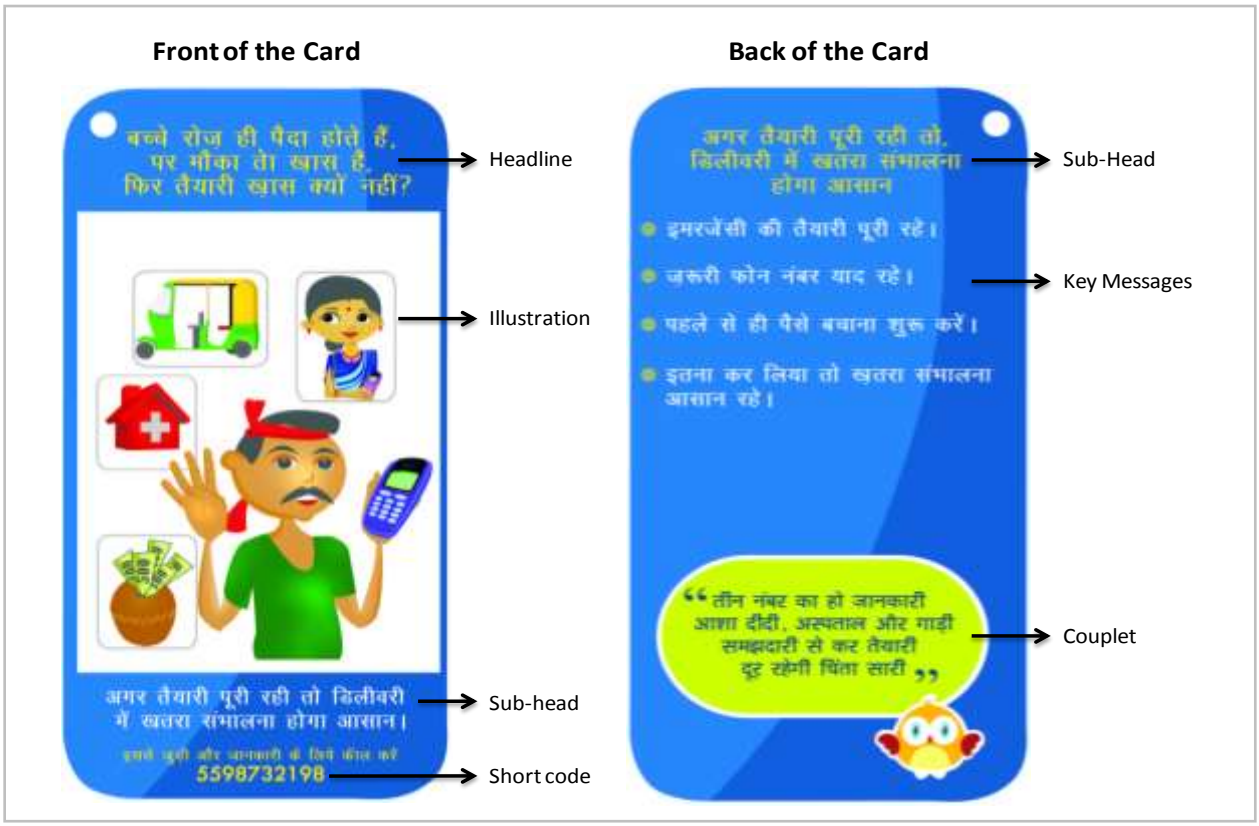
Training and tools to improve FLWs' communication skills. SDP provided a three-day interpersonal communications (IPC) training session to all ASHAs, AWWs, and ANMs in the eight focal districts. This session trained FLWs on the sales cycle approach, a five-step technique to encourage beneficiaries to take important health-related actions when conducting home visits.[1] It also introduced BBC's main job aid tool for FLWs, the Mobile Kunji—a deck of colorful cards with illustrations that can be used to explain important maternal and child health practices to households (see Figure 2). These cards also have short codes (short telephone numbers) that FLWs can dial to play audio recordings from a fictional character called Dr. Anita that reinforce the same messages as the illustrations. IFHI also provides FLWs with a job aid kit to help them communicate with households. This kit is a bag containing items that FLWs can show women during home visits to explain MNCH information, including a *katori* or bowl, a model of a uterus, a Copper-T intrauterine device, a strip of iron/folic acid tablets, and so on.

Training and tools to improve FLWs' capacity to plan and track home visits and other services. With technical knowledge and communication skills, FLWs should be better prepared to provide accurate and complete information to households and communicate that information effectively. However, these skills can effect wide-ranging behavior change and improved practices only if FLWs conduct visits to all eligible beneficiaries at the appropriate times. To increase the frequency and timeliness of home visits, IFHI has developed for FLWs a home visit planner, which specifies when and how many times they should visit a household during pregnancy and after the birth of a child, and provides a format in which FLWs can build a schedule for visits and record visit dates (see Figure 3). The subcenter meetings offer training to ASHAs and AWWs on how to use the planner to build and follow a timely schedule for home visits and coordinate more effectively with each other.

Mass media and community mobilization. The Ananya program also aims to deliver important MNCH information directly to households via nonhealth system channels, including radio and television messaging, and other community mobilization activities. SDP has developed a long-format radio show called *Khirki Mehendiwali* that relays important family health messages through the story of a young girl named Mehendi. Three 15-minute episodes are broadcast each week, with all three playing each weekend. SDP also developed television advertisements on birth spacing and birth preparation that were broadcast throughout the state. It conducted a mobile van rural activation campaign to screen the birth preparation advertisement in areas with low media access. Other community mobilization activities started only shortly before our data collection and therefore fall outside the scope of this study.

[1] The five steps are (1) establish a relationship; (2) identify a need; (3) formulate a solution; (4) get the family to commit to the solution; and (5) follow up and reinforce the solution.

Figure 2. Sample Mobile Kunji card



Source: BBC Media Action. "Shaping Demands and Practices: Progress in 2011 and Plans for 2012." Presented at an Ananya Partners Meeting, Patna, India, February 2, 2012.

Quality improvement. This intervention aims to improve facility conditions and ensure that labor rooms have all the necessary resources. IFHI has facilitated the establishment of a QI team that is headed by the medical officer in charge (MOIC), managed by the block health manager (BHM), and includes facility staff at various levels. When the QI team is in place, the PHC staff conduct a structured facility assessment of the team's equipment, supplies, infrastructure, staff resources, and implementation of key protocols. To conduct the assessment and identify gaps in resources, staff use a detailed set of paper-based and electronic checklists developed by IFHI called the Facility Assessment Tool (FAT). Based on the gaps identified, they are expected to develop and implement an action plan, applying if necessary for additional funding.

Skills training. The Ananya program also aims to boost the skill level of the grade A nurses and ANMs who provide delivery and newborn care at facilities. Mobile teams of highly skilled nurses visit facilities monthly to provide delivery staff with both classroom and practical on-the-job training on important practices and procedures. This training is offered for five consecutive days each month for 10 months in total and covers a range of topics from conducting clean and safe deliveries and maintaining inflection control standards, to identifying delivery complications and making appropriate referrals. Ideally, each facility also establishes a mini skill lab, which is a room that contains all training materials and basic delivery and newborn-care equipment. Nurses and ANMs can use this lab to practice the skills they learn during the trainings.

Figure 3. Home visit planner

B. Data collection and sample sizes

To collect the information needed to understand how these interventions were implemented, learn about key successes and challenges, and gather lessons for scale-up, we conducted interviews and focus group discussions with a variety of stakeholders in both focal and nonfocal districts. The five focal districts in which we collected data were Begusarai, Gopalganj, Saharsa, Samastipur, and West Champaran, which we selected to ensure geographic representation of the regions covered by the Ananya program as a whole and the two innovations selected for rigorous evaluation.[2] We also selected two nonfocal districts (Araria and Gaya) to obtain a qualitative sense of the availability of family health services and households' awareness of important MNCH practices in the absence of the Ananya program. We generally selected two blocks per district, one large and one small, and either one or two communities per block. We made a few adjustments to this rule where necessary to capture additional information on the facility-level interventions and the two service delivery innovations.[3]

The stakeholders we interviewed as part of this study include the following:

- **Program staff.** We spoke with project leadership and staff at the district and block levels about how the project was designed and rolled out, challenges in implementation and

[2] We are conducting randomized controlled trials (RCTs) to rigorously evaluate the innovative Ananya interventions ongoing in Begusarai and Saharsa. We collected qualitative information on the two interventions in order to be able to provide additional insight into the trends identified by the RCTs.

[3] We also triangulated the information we collected when possible with management information systems (MIS) data from IFHI and SDP.

solutions they developed, their collection and use of monitoring data, coordination and information-sharing with other team members and Ananya grantees, engagement with the government, and plans for scale-up.

- **Interviews with PHC staff.** We spoke with MOICs, BHMs, and some nurses or ANMs about the QI and self-assessment activities at the facilities, skills trainings offered to staff conducting deliveries, and labor-room conditions and delivery and newborn care procedures.
- **Interviews with FLWs.** We asked ASHAs and AWWs about the home visits they conduct with beneficiaries in their catchment areas, the information they receive at meetings or trainings, and their efforts to conduct enumeration and mapping of their catchment areas. We talked to ANMs about the extent of their involvement in the subcenter meetings and their leadership of any sessions, as well as their coordination and oversight of ASHA and AWW activities in the field.
- **Interviews with pregnant women in their last trimester, mothers with newborns, and mothers with six- to seven-month-old children.** We chose these three types of household respondents because Ananya has a strong focus on health care services provided in the last trimester, the first month after the child's birth, and when the child is six to seven months old (when he or she should begin eating solid and semisolid foods). We asked household respondents about their interactions with FLWs, the information provided during any home visits, and the tools used to explain family health information.
- **Focus groups with mothers-in-law and husbands of women with children younger than 12 months.** Some IFHI and SDP interventions target husbands and mothers-in-law, key influencers in health care-related decision making in the household. We therefore conducted focus groups to get a sense of the attitudes of these household members and their roles in preparing for delivery, caring for the child, and making decisions regarding family planning.

Table 1. Sample size

Stakeholder	Five focal districts (non-innovation blocks)	Begusarai (TBGI innovation blocks) [a]	Saharsa (ICT innovation blocks)	Nonfocal districts
Frontline workers	22	22	23	24
Target women	24	24	24	24
PHC staff	16			8
Focus groups with mothers-in-law and husbands[b]	16			16
IFHI and SDP district and block staff	26	2	2	
Total	104	48	49	72

Note: ICT = Information Communications Technology; TBGI = Team-Based Goals and Incentives

[a] Because the two innovations focus on improving services at the community level, we did not conduct interviews with facility staff in the innovation blocks.

[b] Focus groups of husbands had an average of six participants; those with mothers-in-law averaged seven participants.

C. Community outreach: Successes and challenges in implementation

In this section, we present our findings related to the enumeration and mapping intervention; training and tools provided to FLWs to facilitate improved planning and coordination of home visits and effective and accurate communication of family health information to households; and mass media programming that delivers family health information directly to households.

1. Trainings to improve the knowledge and skills of FLWs

ASHAs and AWWs understood the importance of (and approach for) identifying left-out households and integrating them into their service coverage. IFHI staff found when they first started their field work that FLWs defined a household as an entire housing structure when conducting enumeration. Consequently, pages of the survey register (each of which covered the details of one household) became inundated with information, particularly when large extended families all lived in the same structure. Key updates such as pregnancies and births were missed as a result. To address this issue and make certain that all relevant beneficiaries were included in FLW services, IFHI redefined the household as the nuclear family surrounding a *chulha* or kitchen—which ensured that survey registers had enough space for AWWs to add information on new pregnancies and births on an ongoing basis. Most process study respondents had understood the value of this new approach for conducting enumeration and were implementing it, tracking the enumeration details of each nuclear family separately and comprehensively.

There was a high level of recall of technical health information shared during subcenter meetings, but a poorer understanding of information received on planning and coordinating home visits. ASHAs and AWWs most frequently mentioned birth-preparation steps, breastfeeding practices, and family planning methods when asked what they learned during subcenter meetings. By contrast, they had difficulty remembering the detailed guidance they received on *when* to visit pregnant women and young children (CARE provided a very specific schedule starting in the second trimester and ending when the child is 24 months). Although many subcenter meetings appear to have emphasized the home visit planner, few FLWs seem to have grasped the concept—and importance—of building out a visit schedule based on the expected date of delivery or birth date.

CARE and BBC were coordinating effectively to integrate their training content. Since early 2013, SDP community coordinators participated in the majority of IFHI subcenter meetings. Our interviews indicate that the SDP staff discussed the use of Mobile Kunji, Mobile Academy, and the sales cycle approach, adapting their presentation to the technical content of each subcenter meeting. For example, if the theme of the subcenter meeting is family planning, the SDP community coordinator might demonstrate how to use Mobile Kunji using the family planning cards and audio messages.

ANMs have taken greater leadership at the subcenter meetings, but their limited capacity to take on more work than what is already mandated by the government has affected their level of engagement with Ananya. Ananya's vision in focal districts is that CARE subcenter meeting facilitators will eventually transition their responsibilities to ANMs. At the time of data collection, almost all ANMs were leading individual sessions of the subcenter meetings in their catchment areas. However, our interviews indicated several areas for improvement. Several ANMs lacked the confidence and ability to lead entire meetings and had

an imperfect understanding of how to fill out and use home visit planners and other registers. As a result, they were not always able to effectively review ASHA and AWW registers and reinforce the importance of name-based tracking. Beyond these gaps in skill and knowledge, ANMs also exhibited a low level of ownership of the subcenter platform, possibly a result of their heavy immunization-related workload. The Ananya program will have to consider issues of capacity as it scales up the intervention—even the most trained or competent ANMs might be unable to take on the significant responsibilities that Ananya has in mind for them without reducing some of their immunization burden.

Subcenter meetings were sometimes rescheduled or canceled because of conflicts with government activities and programming. A problem that several implementing staff cited, and those responsible for scale-up might also encounter, was that despite meticulous preplanning with block-level government staff, the roll-out of statewide initiatives necessitated cancelling meetings that were scheduled well in advance. Although the microplan was devised to avoid these conflicts, there were additional unplanned activities. As a result, although in general 80 to 90 percent of scheduled meetings go forward as planned, this rate at times dipped as low as 65 percent (according to IFHI MIS data).

Implementation challenges might be adversely affecting the use of Mobile Academy. Not many respondents appeared to be using Mobile Academy (but our sample of ASHAs and AWWs was small, and its low levels of Mobile Academy use might not be representative of trends in the entire population of FLWs given access to the tool).[4] Interviews with program staff highlight several implementation challenges. They mentioned that several ASHAs and AWWs had changed their mobile phone numbers or lost their phones, and so had to be re-registered before they could dial in to the course. In addition, poor connectivity also affected Mobile Academy use. In fact, some FLWs who lived close to Uttar Pradesh (the neighboring state) fell under non-Bihar networks and were entirely unable to access the service. Confusion about the costs of Mobile Academy also affected whether FLWs chose to dial in to the tool. Finally, our observations suggest that low levels of literacy might have influenced how widely the tool was used.

2. Application of new skills and knowledge in planning and conducting home visits

FLWs were conducting home visits more frequently than they had in the past, but rarely used the home visit planner and did not closely follow the recommended schedule for home visits. About half of the household respondents indicated that the FLWs visited more frequently than they had previously. In general, ASHAs were conducting more of the visits than AWWs, who are usually occupied at the anganwadi center until the early afternoon with distributing rations and conducting preschool activities. Although the frequency of visits increased, FLWs seemed to be only loosely following the detailed IFHI time line for home visits from the first trimester through the first two years of a child's life. This might be linked to the fact that FLWs generally do not do much planning with regard to their visit schedules. With the exception of two respondents, none of the ASHAs and AWWs we interviewed had a sound grasp of how to use the home visit planner.

[4] SDP MIS data indicate that a cumulative 25 percent of FLWs had completed the course by June 2013.

There are a few potential explanations for the low levels of home visit planner use, the first being poor literacy. Our interviews indicated that ASHAs (who typically have an 8th-grade education) were experiencing particular difficulties in filling out the home visit planner. The detrimental effects of poor literacy were likely compounded by the complexity of the register and the accompanying instructions. FLWs were required to transfer pregnancy and birth information into the home visit planner, calculate expected delivery dates and on that basis the dates of planned visits, update that schedule based on birthdates, and enter the actual visit dates. Home visit planner use could have also been limited because FLWs had many other registers to fill out. AWWs, in particular, reported that they had as many as 15 to 20 registers to maintain, and that they only updated the records their meetings were currently prioritizing.

FLWs were sharing information with households about several MNCH practices that are important to follow; they were integrating mothers-in-law, but not husbands, into those discussions. Of those who noted that they received relatively frequent visits from FLWs (about half the households we interviewed), most reported receiving information on several key elements relevant to their stage of pregnancy or early childhood. In general, FLWs seemed to be passing on a fair amount of information related to immunization and practices to follow during pregnancy but less related to newborn care and complementary feeding. Most mothers-in-law we interviewed noted that the ASHA or AWW in their area had spoken with them about important family health topics, including tetanus injections, diet during pregnancy, and the benefits of institutional delivery, as well as breastfeeding, complementary feeding, and family planning practices after birth. Husbands, however, had few opportunities to interact with FLWs. Most were at work in the field when the FLW typically visited (during the day), and many felt that health care for their wives and children was more the responsibility of the women in their families.

While FLWs were enthusiastic about Mobile Kunji, the tool may not have been used to full potential given literacy issues. ASHAs and AWWs were excited about Mobile Kunji and felt that it had helped them communicate information to households more effectively. The electronic data that SDP collected to monitor Mobile Kunji use showed that levels of access have increased steadily over time. That said, program staff noted that participants who had trouble reading and writing were generally less likely to use Mobile Kunji, with a few perhaps opting to use the audio over the cards. Given that ASHAs are on the whole less educated than AWWs, they seemed to have greater difficulties with the Mobile Kunji.

Most ASHAs and AWWs were implementing step 1 (establish a relationship) and step 3 (formulate a solution) of the sales cycle approach, but very few had understood and executed the remaining steps. Most FLW respondents noted that they made sure to establish a relationship (step 1) by greeting family members politely when they entered the house, and talking first to the mother-in-law before asking to speak with the pregnant woman or mother of the newborn or young child. Not as many were adept at implementing step 2—identifying the need; very few reported asking the beneficiary whether she had any problems, questions, or concerns and targeting their messages accordingly. Instead, they implemented step 3—formulate a solution—mainly on the basis of the type of beneficiary they were visiting. For example, to a woman in her eighth month of pregnancy, the ASHA provided information about delivery preparations, including saving money and arranging for transportation to the facility. Very few of

our respondents seemed to have implemented steps 4 and 5 (getting the family to commit to a solution and following up and reinforcing the solution).

3. Exposure to mass media and community mobilization

Very few households had heard the radio program or seen the two television advertisements. Given the extraordinarily low rate of radio and television penetration in rural Bihar, exposure to SDP's television and radio programming was very limited among respondents. SDP's efforts to tackle this challenge through the mobile van rural activation campaign were more successful. Program staff noted that when these screenings took place, the audiences that gathered to watch the video ranged from 75 to 200 people. They reported high levels of participation from women of all ages, and that reactions to the video and accompanying street play, in their view, were generally positive.

D. Facility interventions: Successes and challenges in implementation

1. Quality improvement

PHC staff found the paper-based tool useful in conducting a comprehensive review of facility resources but sometimes needed CARE's help with coordinating the process. The BHMs with whom we spoke were uniformly appreciative of the FAT. Several found it useful because it offered a comprehensive and detailed listing of the minimum standards that a facility should maintain—information they felt they had a particularly weak understanding of given their lack of medical training. After using the FAT, they became more familiar with the equipment and medicines needed in the facility and the infection-control practices to follow in the labor room and operation theater. BHMs required assistance and oversight in conducting and managing the assessments. CARE staff helped with coordination, explained technical terms, on occasion even completed the forms themselves.

Few BHMs understood how to use the electronic version of the tool to identify gaps. After the paper-based checklists have been filled out, IFHI asks facilities to input the collected information into an electronic version of the tool. The software program, which CARE has installed on each PHC's computer, runs built-in algorithms on the data to generate signal functions of red, yellow, and green which indicate how well departments and areas are functioning and opportunities for improvement. Few PHCs understood how the signal functions worked or used them to inform the QI process, likely as a result of low computer literacy and the generally poor quality of the machines at these facilities. Therefore, IFHI staff often took the lead on updating the electronic file.

The facility assessment focused more on identifying gaps in equipment, supplies, and infrastructure in the labor room and general facility infrastructure, and less on issues related to drug supply, staffing resources, and implementation of key protocols. The FAT was designed to uncover gaps across various types of resources at the facility, including equipment, supplies, medicine, infrastructure, and staffing. However, most respondents found it most helpful in identifying and addressing deficiencies in equipment and supplies, and to some extent infrastructure, in the labor room.

Facilities used the FAT results to guide their facility-improvement efforts, but did not always generate and follow formal and written action plans. In general, action plans seemed

to take lower precedence than other elements of the QI process, with few using a written document to specify a step-by-step strategy for addressing the gaps identified by the facility assessment. However, PHCs did look at the results of the facility assessment to assess next steps and establish processes to ensure those steps were completed.

PHCs paid for basic supplies and repairs using their locally administered funds, but relied on CARE's help to obtain district approval and financing for larger improvements. Each PHC has access to (and discretion over how to spend) approximately 175,000 rupees of government funds each year. This sum (a combination of its annual maintenance grant, untied funds, and the resources allocated to and managed by its *Rogi Kalyan Samiti* (RKS or Patient Welfare Committee) is typically used to pay for day-to-day expenses at the facility. Although PHCs generally did not have difficulties obtaining funds through the RKS for small purchases and fixes, they depended heavily on IFHI's help with applications to the district (for approvals of larger-scale improvements). IFHI officials assessed their needs and directed them to the appropriate department or pool of funds, explained complex guidelines on information to include in the application forms, and brought applications to the attention of key government officials in order to expedite the release of funds.

PHC staff had varying levels of capacity for and interest in sustaining CARE's level of engagement in the quality improvement process. The extent to which PHCs seemed ready to take the QI process forward without CARE's assistance varied. Some "model" PHCs with motivated staff will likely take the initiative to continue QI team meetings and regularly assess and resolve gaps. Others have more uncertain capacity and follow-through. Although staff at several of the facilities seem interested in improving the quality of the services provided, they are also stretched very thin and have little incentive to work overtime on little pay to follow directives that no one is explicitly enforcing.

2. Skills training

Nurses and ANMs were enthusiastic about the trainings and had a high level of recall of the topics covered. The nurses we interviewed had a high level of recall of the topics covered during the training, which included practices and procedures related to hygiene and sanitation, infection control, delivery, and newborn care. They reported that the information was communicated clearly and was easy to understand, and that the sessions offered more detailed instruction than they had previously received and reminded them of important procedures and protocols.

Only about half the facilities were able to set up a mini skill lab, but most ANMs and nurses felt their facilities had all the tools they needed to practice what they had been taught during classroom sessions. A few facilities have set aside separate rooms for the mini skill labs. These rooms have models and sample materials available for practice at all times and are positioned close to the labor rooms and newborn care corners so that trainers can easily demonstrate important techniques and practices. Others have not been able to set aside a separate room for this purpose, with most converting the nurse or ANM duty station, or a meeting hall, into a temporary training room when needed. However, nurses and ANMs generally reported that they had access to all the labor room instruments they required to practice or implement the procedures covered by the training.

A widespread shortage of nurses and ANMs, as well as their frequent transfers between facilities and time-consuming duties in the field, might have limited the extent to which skills trainings influenced quality of care. Several CARE district staff noted considerable difficulties in identifying nurses and ANMs to attend the trainings given the general shortage of individuals in these positions. PHC and CARE staff also reported frequent transfers and deputations of nurses and ANMs, which means that both those who moved to other facilities and the staff who replaced them received only partial training. Nurses and ANMs also were pulled away by government initiatives, such as the pulse polio program or family planning operation camps, as well as routine work at what are extremely short-staffed facilities.

E. Lessons for scale-up

Some of the information gathered on implementation successes and challenges has significant implications for scale-up and program expansion. From our interviews we elicited high-level lessons related to a variety of issues, including **(**1) government staff ownership of Ananya activities, (2) the availability of key service providers, and (3) the need for a constructive handholding approach in trainings for health workers.

Requiring or incentivizing participation in Ananya programming will help strengthen the sustainability of both community- and facility-level interventions. Several health workers did not think Ananya intervention activities fell under their job description and instead viewed the interventions mainly as CARE and BBC programs. For the interventions of the technical support unit (TSU) to be sustainable, it would be helpful to integrate into the more routine duties of government staff several functions currently assumed by CARE and BBC field staff, including planning and conducting subcenter meetings and IPC trainings, field visits to support enumeration and name-based tracking, analyzing facility assessment data, devising action plans, and organizing ongoing skills trainings for hospital staff. It will be important to consider how best to incentivize government staff to take ownership of these new roles and functions, either explicitly requiring its workers to perform these program activities or tying the interventions (or participation in intervention activities) to indicators it tracks and for which it sets targets.

Close monitoring and oversight of intervention activities in the field will also be critical to ensure the effective implementation of activities. In addition to taking ownership of Ananya and other grant activities, it will also be important for the health sector to incorporate into its work the monitoring activities that program implementers currently execute. The IFHI and SDP district and block staff we interviewed felt strongly that one of the main ways to ensure that interventions are rolled out effectively is to have the government increase its field presence and closely monitor and oversee all program activities. For instance, block-level staff—such as the MOICs, BHMs, and block community mobilizers—and other officials could more frequently visit subcenter meetings and IPC trainings, and district officials could increase their involvement in the monitoring and oversight of activities at block health facilities.

Addressing human resource shortages will be critical to the sustainability of program interventions. The tremendous shortage of health staff, particularly at the block level, has limited the ability of Ananya interventions to effect positive change. For instance, nurse and ANM positions are frequently unoccupied, which means fewer staff can be trained to conduct clean and safe deliveries and to handle maternal and newborn complications. In this context, the

targeted populations might receive incomplete care despite efforts to improve family health services via training. Although this human resource issue has been beyond the scope of the Ananya program thus far, the TSU might be able to work with the government to address this gap going forward.

It is important to continue encouraging and motivating health workers, who have concerns about their skills and capacity and could be intimidated by those in positions of authority. Program implementers note that their main strategy for stimulating the interest of health workers is to always encourage the staff they are training, present plenty of positive input, and ensure that their feedback on areas for improvement is tactful and constructive. They believe this explicit effort to motivate health workers distinguishes Ananya from other health initiatives in the state. Accustomed to trainings at which doctors or government staff berate them for not knowing or understanding critical practices, health workers are encouraged by the positive approach that Ananya program staff take and motivated to improve their work despite a heavy burden and low pay. It is important that scale-up districts adopt this approach to training and guidance.

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I. INTRODUCTION

In 2010, the Bill & Melinda Gates Foundation created the Family Health Initiative, now known as the Ananya program, as part of a flagship effort to reduce maternal, newborn, and child mortality; fertility; and undernutrition rates in Bihar, India. By bundling services and delivery mechanisms from several of the foundation's global health strategies, the initiative takes an integrated approach to improving service coverage and uptake across the continuum of family health, which includes maternal, neonatal, and child health (MNCH); reproductive health; and nutrition.

Ananya's six complementary grants tackle the persistent challenges related to health, nutrition, and sanitation by adopting both supply- and demand-side strategies to achieve its goals (see Figure I.1). On the supply side, these grants are intended to improve the coverage and quality of services that health care providers offer in the public and private sector. On the demand side, these grants seek to increase awareness of and demand for high-quality MNCH services among households with pregnant women and young children through increased interactions with frontline health workers, as well as through media and community forums. In its first two years, the Ananya initiative was implemented in eight focus districts in western and central Bihar (see Figure I.1). The foundation and its partners are now scaling up select interventions to the rest of the state via a Technical Support Unit that will work hand in hand with government officials at various levels.

Mathematica Policy Research, the lead measurement, learning, and evaluation (MLE) partner for the Ananya program, has been working closely with local partners Public Health Foundation of India and Sambodhi Research & Communications to examine the overall effectiveness of the Ananya initiative and obtain a broad understanding of how the supply and demand approaches under Ananya were implemented. We conducted a large impact study to measure the effectiveness of the program, collecting baseline data in early 2012 and midline data in early 2014 in all 38 districts of Bihar. The aim of our process study, conducted in spring 2013, was to understand and explore in greater depth how program activities were implemented—that is, to gather information on the main successes and challenges associated with implementation and elicit lessons related to the sustainability of key interventions. These findings have informed the findings of our impact analysis, providing insights into why and how program impacts were or were not achieved and how trends vary across subgroups of the population. The process study findings can also help inform program-improvement efforts and facilitate decision making related to scale-up.

This report focuses on the findings from our process study of two early Ananya grants: (1) Integrated Family Health Initiative (IFHI), led by CARE, and (2) Shaping Demand and Practices to Improve Family Health in Bihar (SDP), led by BBC Media Action. Together, these grants aim to increase the supply of and demand for high-quality family health care in the public sector.[5]

[5] As part of this round of the process study, we also examined the implementation of the grant entitled "Engaging Private Providers to Improve Management of Tuberculosis, Visceral Leishmaniasis, Childhood Pneumonia, and Diarrhea," led by World Health Partners (WHP). Given that WHP is focused entirely on the private sector—in contrast to SDP and IFHI, which aim to improve the capacity of government health workers and facilities—we present our findings on the WHP interventions in a separate memo.

IFHI provides trainings to community-level health workers that aim to improve their technical knowledge and management skills and works with health facilities to improve conditions and train staff on delivery and newborn care techniques. SDP focuses on improving interpersonal communication between health workers and households and is also implementing mass media and community-mobilization interventions that pass family health messages directly to households. We focused this process study on the IFHI and SDP grants, because their activities had begun earlier than other grants. At the time this study was scheduled to take place, they had been implemented for approximately one year, and therefore had had time to take root.

Figure I.1. The Ananya program: Map of focus districts and summary of current grant portfolio

Grant	Lead partner	Start date	Objective
Integrated Family Health Initiative (IFHI)	CARE	November 2010	Increase the availability, quality, and coverage of key cost-effective family health interventions
Shaping Demand and Practices (SDP)	BBC Media Action	December 2010	Use media and communication to generate demand for health services and strengthen health-seeking behaviors
Engagement of Private Providers for Infectious Disease Management	World Health Partners (WHP)	October 2010	Equip a network of private providers to improve the diagnosis and treatment of childhood diseases
Community Mobilization and Social Accountability	Project Concern International (PCI)	November 2011	Create or strengthen community organizations that can drive demand for better health services
Government-to-Person Health Payments (G2P)	International Finance Corporation (IFC)	November 2011	Improve the efficiency and transparency of payments made to health workers and program participants
Supporting Sustainable Sanitation Improvements (3SI)	Population Services International (PSI)	July 2012	Establish a sustainable market-based supply chain for sanitation products and services

Source: Bill & Melinda Gates Foundation. "Ananya: A Partnership for Better Health in Bihar." Available at [http://www.ananya.org.in]. Accessed November 25, 2014.

This chapter provides an overview of the public health infrastructure in Bihar that will help to set the context in which the Ananya interventions are being implemented. We then provide a detailed description of the IFHI and SDP programs, and their key components and objectives. The chapter also lists the detailed research questions that the study tries to answer. In addition, it explains the study methodology, presenting information on the selection of the sample, interview data collection, and approach to the analysis.

A. Government health infrastructure

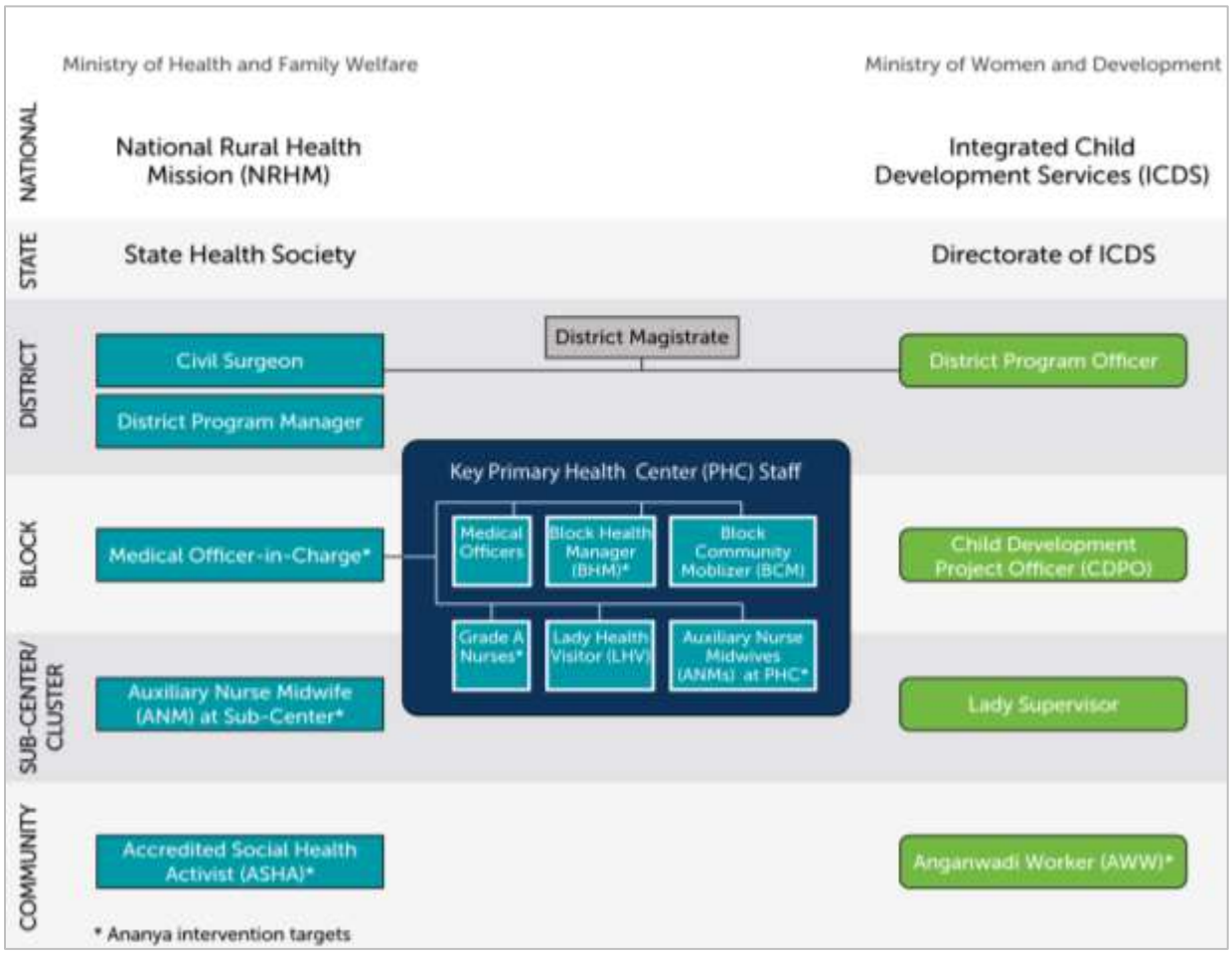
Public health services in Bihar are provided through a network of health facilities, which are organized into tiers, and frontline workers (FLWs), who operate at the village or community level and interact most directly with households (see Figure I.2). These services are managed by two entities: (1) the Ministry of Health and Family Welfare and (2) the Ministry of Women and Child Development. The Ministry of Health and Family Welfare operates largely through the National Rural Health Mission (NRHM), and the Ministry of Women and Child Development operates through the Integrated Child Development Services (ICDS). Below, we describe the structure of the health system, starting with FLWs and their roles, and then describe the organization of public health facilities.

Frontline workers at the village or community level. At the community level, households interact directly with two cadres of FLWs: anganwadi workers (AWWs) and accredited social health activists (ASHAs). Anganwadi workers are deployed under the ICDS program. They operate out of anganwadi centers in villages, where they provide take-home rations (THRs) to pregnant women and young children, monitor children's weight, and conduct informal preschool activities. In addition, they hold village health and nutrition days (VHNDs), during which the auxiliary nurse midwife (ANM) of the subcenter provides immunizations and antenatal care checkups. AWWs are responsible for the mapping and enumeration of all the households in their jurisdictions. They are also expected to conduct home visits that focus on children's growth. ICDS expects AWWs to have completed a 10th grade education and provides a 26-day training course at their introduction into the agency.[6] AWWs are paid an honorarium for their services and are overseen by "lady supervisors," who are part of the ICDS structure.

Connected to the catchment area of each anganwadi center are one or more ASHAs, who were introduced into rural India in 2006 by the National Rural Health Mission. ASHAs, who are supervised by ANMs, are responsible for increasing awareness of important family health practices and helping households access available services. For instance, they conduct home visits to pregnant women and mothers with young children, accompany women to public health facilities for delivery, promote family planning and accompany women to facilities for sterilization, ensure that children receive immunizations, and distribute basic drugs and contraceptives. ASHAs are required to have completed the 8th grade, and receive a 23-day induction training course that is conducted in five rounds over their first year in the position. They do not receive a salary or honorarium but are typically paid incentives for facilitating institutional deliveries, sterilizations, and immunizations for children.

[6] They are also supposed to receive a short refresher training course after one or two years, although this follow-up is often delayed.

Figure I.2. Government health infrastructure



Sub-centers. The public health facilities in Bihar are organized in a tiered system. The lowest tier is composed of subcenters, which cover a population of 3,000 to 5,000, and incorporate several anganwadi center catchment areas. Subcenters are where the community first interacts with the formal health system and are staffed by ANMs (who supervise ASHAs). They are intended to provide essential primary health services, including immunizations, maternal and child health care, family planning, and medications for minor ailments. ANMs provide these services both at the sub-center and at village health and nutrition days held in the anganwadi centers in their subcenter catchment area. To qualify for this position, they are required to take a one-year diploma course and also complete a 21-day skilled birth attendant (SBA) training. NRHM pays them a salary for their work.

Public health facilities. Subcenters fall under the jurisdiction of primary health centers (PHCs). Each "block" (an administrative unit in rural India) contains one PHC, which for most rural households is the first point of contact with an accredited medical doctor. These facilities typically have an inpatient ward with six beds, as well as facilities for delivery, family planning, basic surgical procedures, and some diagnostic testing. The head of each PHC is the medical officer-in-charge (MOIC), a qualified medical doctor. The MOIC is assisted by other medical officers (MOs), the block health manager (BHM), who handles all management issues; a lady health visitor, who supervises all ANMs in the subcenters connected with the PHC; grade A

nurses and/or ANMs, who manage the labor room and assist with any other operations; *dais*, who assist nurses and ANMs with deliveries and newborn care; *mamtas*, who help mothers with immediate postnatal and postpartum care; as well as other support staff, which may include a block community mobilizer (BCM), family planning worker, lab technician, data operator, pharmacist, and more.

PHCs may refer cases to higher tier facilities. The first referral unit for PHCs in Bihar is typically the district hospital (though there are subdivisional hospitals in a few areas). Women who experience complications with their delivery are ideally referred to the district hospital, which typically provides specialist care in areas such as internal medicine, obstetrics and gynecology, general surgery, and pediatrics.

Administration. NRHM and ICDS have parallel administrative structures. MOICs, in addition to leading and providing medical services at the PHC, are also the block administrative leads for NRHM. ICDS also has block functionaries in place—child-development project officers oversee all ICDS block activities. At the district level, NRHM's activities are overseen by the District Health Society. The member secretary of the District Health Society is the civil surgeon, and under the civil surgeon is the district program manager. ICDS, in turn, has a district program officer who manages all of the agency's district-level activities. The district magistrate supervises the work of both NRHM and ICDS, and is also the chairman of the District Health Society.

B. The IFHI and SDP grants

Through coordinated and complementary activities, the IFHI and SDP grants seek to improve the supply of and demand for high-quality family health care, and thereby transform health behaviors and practices in Bihar (see Figure I.3). The IFHI grant works mainly on the supply side. It aims to lead to more and better family health services by training health workers and providing them with important technical information and the tools they need to better manage their operations. The SDP grant works on both the supply and demand sides. It trains health workers on how to communicate effectively with households and gives them audiovisual tools with which to improve these interactions. Through mass media and community mobilization, it aims to increase the awareness and knowledge of family health services in Bihar and thereby encourage critical health-seeking behaviors among households with pregnant women and young children. A timeline of these activities is provided in Figure I.4.

Integrated Family Health Initiative in Bihar. The IFHI grant, run by a CARE-led consortium, aims to extend the reach and enhance the quality of MNCH services at the community and block levels in Bihar.[7] The central assumption of its theory of change is that increasing providers' capacity will improve family health service delivery and household-level behaviors. At the heart of its capacity-building effort is the "subcenter platform", which is a monthly training program for AWWs and ASHAs held at the sub-center level that will eventually be led entirely by ANMs. During these meetings, IFHI instructs frontline workers on

[7] CARE's consortium partners include the Averting Maternal Death and Disability program at the Mailman School of Public Health at Columbia University, the Saving Newborn Lives program at Save the Children, Emory University, Abt Associates, and Janani (a local nonprofit organization focused on family planning).

"name-based tracking," which describes how to use registers to plan regular home visits and services to beneficiaries. It also provides training on what technical information to share with households during those visits. IFHI also tries to improve the enumeration and mapping of FLW catchment areas, thereby hoping to ensure that all beneficiaries are listed in FLW survey registers[8] and explicitly included in their coverage. It facilitates the process of identifying households that are not linked to FLWs and integrating them into FLW catchment areas, and trains FLWs on how to more accurately collect enumeration details.

Figure I.3. IFHI and SDP interventions

Community-level activities	**Targeting frontline workers**	Enumeration and Mapping (IFHI)	Identification of households that are not linked to ASHAs and AWWs and their integration into FLW catchment areas; training for FLWs on how to more accurately collect enumeration information
		Subcenter Platform (IFHI)	Training to improve FLWs' technical knowledge and their ability to plan and manage home visits and other services
		Mobile Academy (SDP)	Interactive voice response (IVR)-based course on family health care
		IPC Trainings and Mobile Kunji (SDP)	Training (and an interactive mobile phone-based tool) to improve FLW interpersonal communications with households
	Targeting households	*Khirki Mehendiwali* Radio Program (SDP)	Long-format radio series that chronicles the life of a young girl named Mehendi and through her story illustrates important family health behaviors
		TV Advertisements (SDP)	Television advertisements relaying messages related to birth spacing and birth preparation
		Community Mobilization (SDP)	A mobile van campaign to broadcast the birth-preparation advertisement in communities with limited TV access
		Kilkari Family Time Line Service (SDP)	A system through which families register to receive calls informing them about critical practices to follow at crucial junctures during pregnancy and early childhood
Facility-level activities	**Targeting PHC staff**	Quality Improvement (IFHI)	A facility assessment to identify gaps in resources and infrastructure and the development of a corresponding action plan
		Skills Trainings (IFHI)	Skills trainings on delivery and newborn care for ANMs and nurses

IFHI also works with medical and managerial staff at primary health centers. It has established at these government clinics a quality improvement process that involves a facility assessment to identify gaps in resources and infrastructure and the development of a

[8] These are registers in which FLWs list the demographic details collected during enumeration.

corresponding action plan. At select facilities, IFHI has also initiated skills trainings on delivery and newborn care for ANMs and nurses. IFHI staff have also tried to improve district oversight of facilities. It has operationalized a committee called the District Quality Assurance Cell (DQAC), which is composed of high-level district officials, and encouraged these individuals to visit health facilities and provide direct feedback to facility staff.

The community outreach and facility-level activities described above are the core of IFHI's work and broadly implemented across the eight focal districts. In addition to those interventions, IFHI is also piloting several innovative initiatives on a small scale in individual districts. Mathematica is rigorously testing two of these innovations using randomized controlled trials. One, the Continuum of Care service, provides FLWs with mobile handsets that facilitate the planning, coordination, and tracking of home visits to beneficiaries. The other, the Team-Based Goals and Incentives (TBGI) program, offers FLWs nonmonetary incentives for achieving key family-health targets in their communities. The implementation of these two innovations, which this process study examined, will be analyzed in separate reports that also summarize the results of the quantitative analysis. CARE has also developed several other innovations, which are all in different stages of implementation (and fall outside the scope of this study).[9]

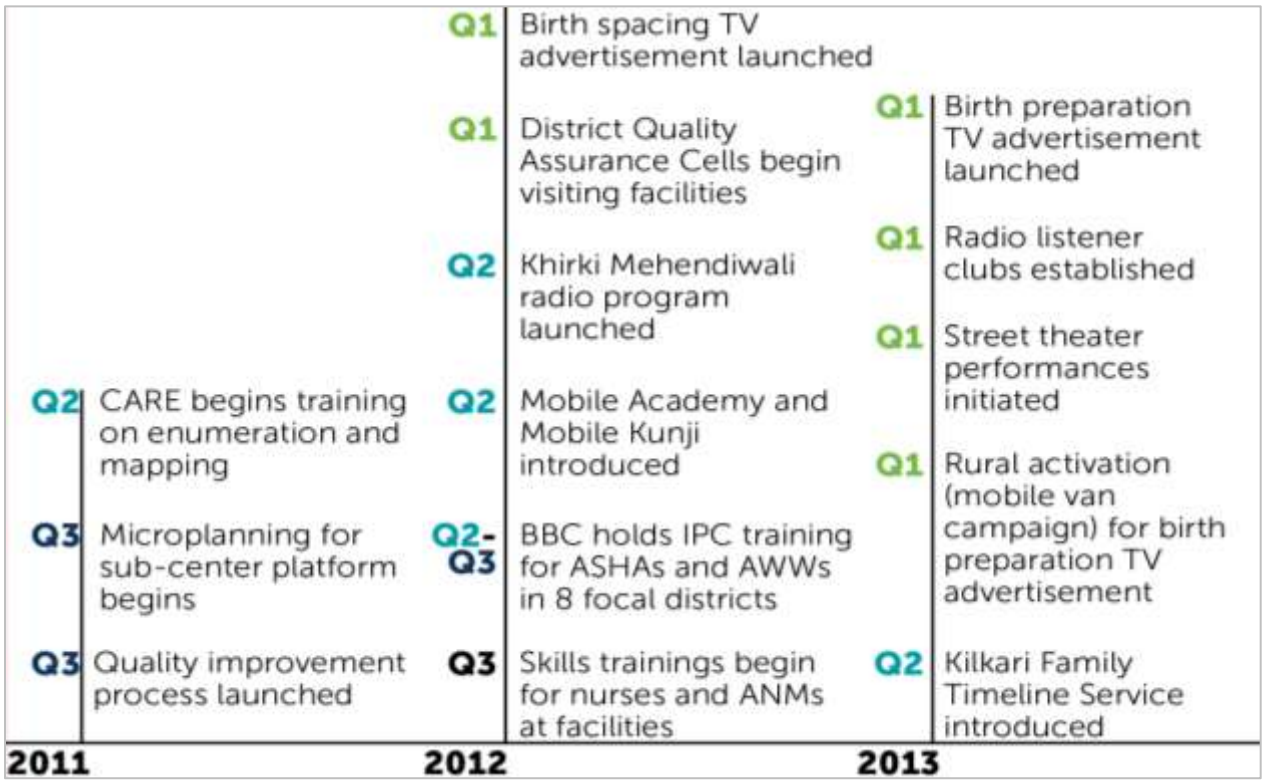
IFHI has set up a large team to oversee the implementation of its community outreach and facility interventions (see Figure I.5). For community outreach activities, block coordinators are the main point persons in the field; they plan and attend all subcenter meetings and collect extensive monitoring data. The subcenter meetings are led by facilitators that CARE has hired on a part-time basis. Both block coordinators and meeting facilitators report to the district outreach officer, who manages all district-level activities related to frontline workers.

For IFHI's health facility interventions, the key block-level staff were, until recently, facility coordinators, who were each responsible for two PHCs. In the spring of this year, however, CARE replaced facility coordinators with quality improvement (QI) coordinators, who are responsible for four to five facilities and generally have higher qualifications and more experience. A district facility officer supervises all QI coordinators in a district.

Both the district outreach officer and district facility officer report to the district manager, who has overall responsibility for implementing all IFHI activities in a district and also takes the lead on engaging with the district government. Senior program staff include regional managers as well as management, technical, and evaluation leads.

[9] These additional innovations include an incentives program for ANMs for facilitating IUD usage, umbilical cord cleansing with Chlorohexidine, a referral package for maternal and infant emergencies, the use of multiple micronutrient powders to prevent anemia in children and lactating women, and the community-based identification, referral, and management of neonatal sepsis.

Figure I.4. Timeline of IFHI and SDP activities



Sources: Interview notes; BBC Media Action. "Outputs." Available at [http://www.rethink1000days.org/programme-outputs/]. Accessed November 20, 2014.

Shaping demand and practices to improve family health in Bihar. The SDP grant, run by a BBC-led consortium,[10] aims to transmit information about and increase adoption of practices in nine critical family health areas via a multilayered "360 degree" communications approach.[11] That is, it tries to relay family health messages to beneficiaries in a variety of ways to increase the likelihood of those messages reaching their intended audience. The assumption underlying its theory of change is that increased awareness and knowledge of available family health services and important practices to follow will result in appropriate care-seeking behavior and improved health outcomes.

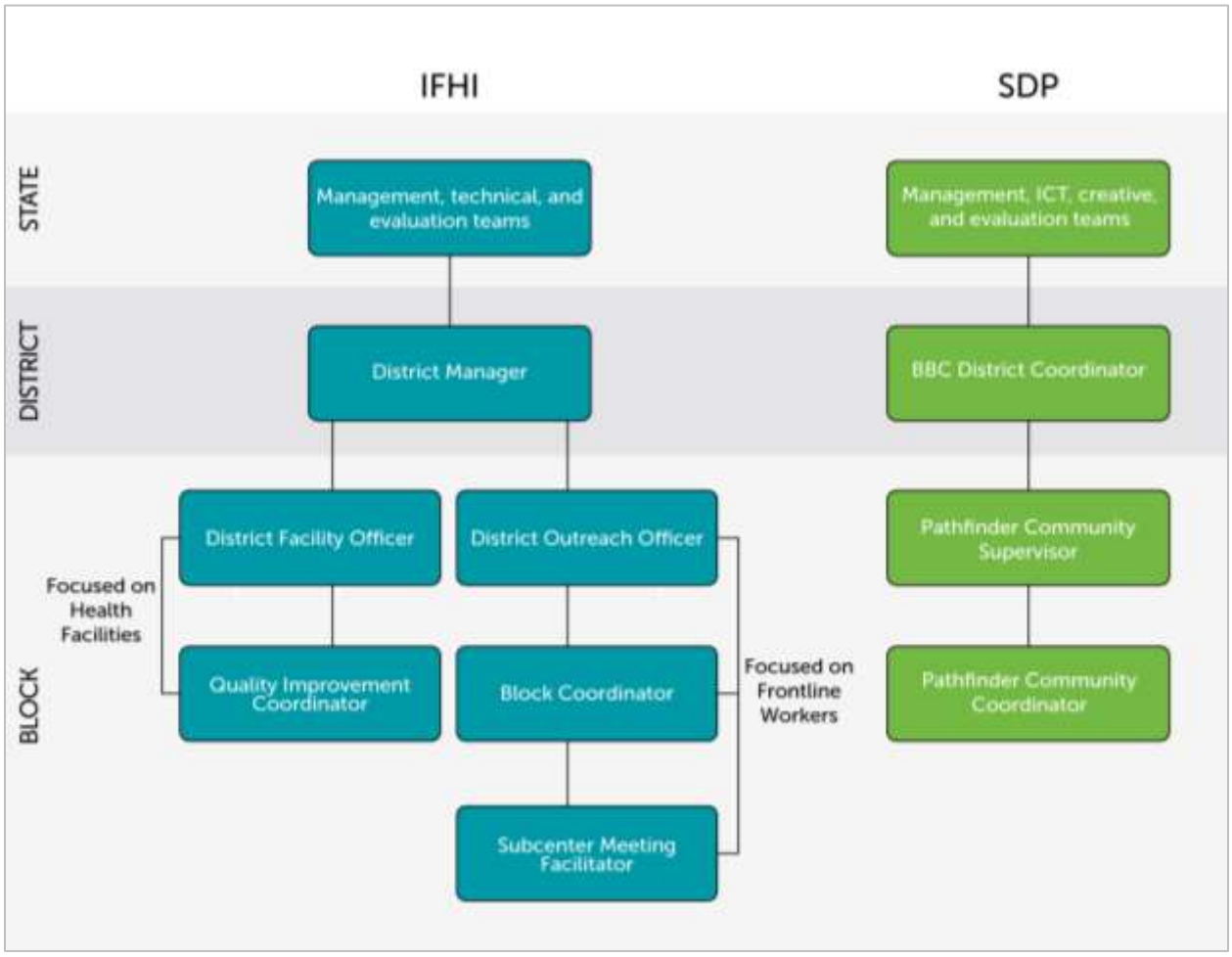
SDP's most intensive effort to achieve this objective is its interpersonal communications (IPC) intervention. For this effort, it has developed a detailed methodology for improving discussions between FLWs and households, which incorporates the use of an interactive tool known as Mobile Kunji. This tool, developed by BBC, combines a deck of colorful cards with audio messages explaining the details of key MNCH practices. FLWs are trained on how to use it while implementing a "sales cycle approach," a five-step methodology for effectively

[10] BBC's consortium partners include Pathfinder International, Madison World, and GSMA.

[11] The nine areas are: "(1) institutional delivery, (2) safe delivery at home with a skilled birth attendant, (3) preventive postnatal care, (4) skin-to-skin care/kangaroo care, (5) early and exclusive breastfeeding, (6) age-appropriate complementary feeding, (7) postpartum family planning, (8) immunization compliance, and (9) hand washing at critical times." BBC Media Action. "Ananya: Shaping Demand and Practices." September 8, 2011.

explaining health information to beneficiaries during home visits and persuading them to implement important practices. Another interactive tool that SDP has developed is the Mobile Academy. This interactive voice response (IVR)-based course on family health care supplements the technical training provided at IFHI's subcenter meetings.

Figure I.5. Program staffing structure



SDP also tries to disseminate information directly to households with mass media interventions. It has developed a long-format radio series called *Khirki Mehendiwali* that chronicles the life of a young girl named Mehendi and through her story illustrates the importance of the nine behaviors. It has broadcast television advertisements showcasing two of the behaviors (family planning and birth preparation). It has also put up billboards and posters with the same messaging as the TV advertisements. SDP also uses information communication technology (ICT) to reach out to households directly. Its Kilkari Family Time Line Service is a system through which families register to receive calls informing them about critical practices to follow at crucial junctures during pregnancy and early childhood.

Finally, the SDP consortium is implementing three types of community-mobilization activities. Within existing self-help groups it has established "radio listener clubs," which are forums for discussing the key messages in episodes of *Khirki Mehendiwali*. It is conducting a

mobile van campaign to broadcast its TV advertisements in communities with limited access to television. Most recently, it has organized street theater performances in villages across the focal districts to reinforce important family health messages. We focused on the rural activation campaign in this study, given that the radio listener clubs and street theater activities were launched only shortly before our data collection.

BBC has built an implementation structure that integrates staff from its partner Pathfinder International (see Figure I.5). Closest to the beneficiaries are Pathfinder's community coordinators, who have helped plan IPC trainings, reinforce IPC messages at subcenter meetings, and observe home visits conducted by FLWs. Individuals in this position are supervised at the district level by Pathfinder's community supervisor, who is in turn supervised by the district coordinator. District staff are broadly responsible for rolling out and supporting BBC activities in their jurisdiction, and working with the government. They are supervised by senior management at headquarters, which also houses the ICT, creative, and evaluation teams.

C. Research questions

This process study aims to answer the overarching question of "What family health approaches were implemented under Ananya? Did they achieve scale?" That is, we focused on gathering information on what was implemented and how, and analyzing the implications of those findings for sustainability and scale-up. We developed the following research questions to guide the study:

- **What demand- and supply-side approaches to improving family health were implemented?** What were the key strategies employed by implementing partners to improve the coverage and quality of family health care? What content was delivered to intervention targets, including frontline workers, primary health center staff, and households?
- **How were grantees' interventions rolled out?** What steps did grantees take to introduce interventions into the field? What were the roles of government officials, and what was the partners' approach to collaborating with government staff? Were the interventions implemented as planned and what were the contextual and other factors influencing any changes to programming?
- **What were the key successes and challenges in implementation?** What aspects of implementation worked well, and why? What problems did the grantees encounter during implementation and how were they resolved? What lessons were learned for future implementation?
- **What are health worker and household perceptions of the supports and family health services provided as part of Ananya?** Which program elements did the health workers and other targets of the intervention find most useful and in which areas did they identify gaps or express the need for additional support? Do households perceive any changes in maternal and child health services as a result of the grantees' efforts?
- **To what extent did grantees integrate their approaches to improving family health outcomes?** What was the nature and extent of collaboration and coordination between grantees during the program life cycle? Were there key synergies between various approaches/interventions across grants?

- **What are the key factors that are likely to influence the sustainability of integrated family health approaches in the focal districts and their scale-up to the rest of Bihar?** How do factors such as infrastructure, capacity of health workers, collaboration between partner organizations, and government involvement affect sustainability and scale-up? What were the key barriers that partners faced in laying the groundwork for sustainable services in the focal districts and what strategies were employed to address those barriers? What are the implications of these challenges for the process of scaling up the program to the rest of Bihar and expanding the role of government staff in implementation?

D. Methodology

To collect the information needed to answer the above research questions, we relied on interviews and focus group discussions (FGDs) with a variety of stakeholders across five of the eight focal districts, including program staff, health workers targeted by the program, and beneficiaries. We also spoke with health workers and households in two nonfocal districts. Below we describe in detail our methodology for sampling, identifying, and collecting information from these sources (also explained in Table I.1).

Selecting the sample. The five Ananya focal districts in which we conducted interviews were Begusarai, Gopalganj, Saharsa, Samastipur, and West Champaran. We considered several factors in selecting these districts. First, we sought to ensure geographic representation. Ananya focal districts are divided between the western and central areas of Bihar, with three in the west and five in the center, and we chose districts from both areas. In western Bihar, East Champaran had an exceptionally challenging implementation environment, with poor physical and administrative infrastructure and minimal government engagement. To avoid including this atypical district in our sample, we selected the two other districts in the west, Gopalganj and West Champaran. In central Bihar, we selected Begusarai and Saharsa to collect supplemental information on the implementation of two of CARE's innovations that we are evaluating through randomized controlled trials (RCTs) in certain blocks in these districts (as mentioned above, this information is presented in two separate memos that also summarize the results of the RCTs). We excluded Patna from the central district sample, given its proximity to the central operations of all implementing partners as well as its sizable urban and semiurban areas, both of which made for a unique implementation context. We then chose randomly between the two remaining central districts, Khagaria and Samastipur—selecting Samastipur. In sum, the sample focal districts consisted of Gopalganj and West Champaran (western non-RCT districts), Begusarai and Saharsa (central RCT districts), and Samastipur (central non-RCT district).

In the non-RCT focal districts Gopalganj, Samastipur, and West Champaran, we randomly selected two blocks, one large and one small (defined on the basis of the total number of households in the block). In each of the two RCT districts, Begusarai and Saharsa, we selected three blocks. Of these, two were RCT blocks, where we collected information on innovation-related activities. In addition, we selected one non-RCT block, where we conducted interviews on the core IFHI and SDP interventions.

We randomly selected communities (villages) in each selected block—one in each non-RCT block and four in each RCT block. We eliminated from our sample very small communities—of fewer than 25 households—and in larger communities with more than one ASHA and one

AWW, we randomly selected one anganwadi center, an AWW's base of operations to which an ASHA is also usually tied. To identify households in the catchment area of the selected anganwadi center, we relied on the registers maintained by the FLWs.[12] Drawing on the register with the most up-to-date record of pregnancies and births in the area (maintained by either the ASHA or AWW), we chose one of each of the three types of household respondents—pregnant women, women with newborns, and women with children six to seven months old.

Table I.1. Selection of districts, blocks, and communities

		Non-RCT		RCT	
		Blocks	Communities (one per block in focal districts; two per block in nonfocal districts)	Blocks	Communities (four per block)
Focal	Gopalganj	2	2		
	West Champaran	2	2		
	Samastipur	2	2		
	Begusarai	1	1	2	8
	Saharsa	1	1	2	8
Nonfocal	Araria	2	4		
	Gaya	2	4		

For interviews with PHC staff, we mostly selected the same blocks that we had identified for the community-level interviews. However, we also wanted to ensure that the facilities we visited were representative of the different types of PHCs with which IFHI was working—some in which it was focusing only on the quality improvement process and others in which it was implementing both the QI process and skills training. We therefore went to a few additional blocks. We also excluded from our sample the PHCs we visited in November 2012 as part of a small qualitative study we conducted to inform the preliminary scale-up of certain IFHI interventions. We used the information collected during those PHC interviews in our analysis for the process study.[13]

As part of the process study, we also selected two nonfocal districts, in which we conducted interviews with key informants. Our intent in selecting nonfocal districts was twofold. First, we aimed to get a qualitative sense of the coverage and quality of family health services as well as household awareness of important MNCH practices in the absence of the Ananya program.

[12] This means we did not interview any households that were not included in FLW registers (and as a result in their coverage areas), which works well for the purposes of this study, which aims to learn more about FLW-household interactions and how they might be influenced by the IFHI and SDP interventions. We do learn more about the health status of households that are not included in FLW registers or officially receiving FLW services from our impact study's quantitative surveys.

[13] We used the information collected during the November 2012 study to supplement our analysis for this report because the process study's sample of facility staff was fairly small and its findings were being triangulated only between two types of stakeholders—that is, MOICs/BHMs and Grade A Nurses/ANMs.

Second, we hoped to learn more about any family health-related activities conducted by other development agencies. To further our efforts to learn more about initiatives to improve family health outside of Ananya, we selected one district (Gaya) in which UNICEF, which also works with health workers on MNCH issues, is active. We also randomly chose one other district (Araria) from the remaining nonfocal districts. Again, we selected two blocks, one large and one small, in each nonfocal district. Given, however, that we were conducting interviews in only two nonfocal districts, we increased the number of sample communities to two per block.

Key informants. We conducted interviews with a range of stakeholders, including staff from the implementing partners, PHC staff, frontline workers, and beneficiary households (sample size specified in Table I.2). In particular, we conducted:

- Interviews with IFHI and SDP staff. We spoke with project leadership and field staff about how the project was designed and rolled out, their roles and responsibilities on the project, challenges in implementation and solutions they developed, their collection and use of monitoring data, coordination and information-sharing with other team members and Ananya grantees, engagement with the government, and plans for scale-up. Specifically, we spoke with:
    - Staff at CARE and BBC India headquarters, including senior management, regional managers, and technical and creative teams
    - CARE district-level staff, including district managers, district facility officers, and district outreach officers, BBC district coordinators, and Pathfinder community supervisors
    - CARE block coordinators and Pathfinder community coordinators[14]
- **Interviews with PHC staff.** To learn more about the implementation of IFHI's initiatives at PHCs, we spoke with MOICs, BHMs, and some nurses or ANMs who had received training from IFHI's mobile skills training teams. These interviews covered QI and self-assessment activities at the facilities; skills trainings offered to staff conducting deliveries; and labor-room conditions and delivery, newborn care, and infection-control procedures.
- **Interviews with ASHAs, AWWs, and ANMs.** In each community we visited, we conducted semistructured interviews with frontline workers. We asked ASHAs and AWWs about the home visits they conduct with beneficiaries in their catchment areas—what they discuss, the tools and job aids they use, and how they plan and coordinate the visits. We also asked about the information they receive at meetings or trainings, and their efforts to conduct enumeration and mapping of their catchment areas. ANM interviews focused on the subcenter meetings (that is, the extent of the ANMs' involvement in the meetings and their leadership of any sessions). In addition, we asked about their coordination and oversight of ASHA and AWW activities in the field.

[14] We had planned to interview CARE block-level facility coordinators, who had worked one-on-one with the facilities. However, at the time of the data collection, facility coordinators had just been replaced with more senior quality improvement (QI) coordinators. Given that these staff were new and had very little experience with the interventions, we did not interview them and instead gathered relevant information from our interviews with district staff.

Table I.2. Sample size

Stakeholder	Five focal districts (non-innovation blocks)	Begusarai (TBGI innovation blocks) [a]	Saharsa (ICT innovation blocks)	Nonfocal districts
Frontline workers	22	22	23	24
Target women	24	24	24	24
PHC staff	16			8
Focus groups with mothers-in-law and husbands[b]	16			16
IFHI and SDP district and block staff	26	2	2	
Total	104	48	49	72

Note: ICT = Information Communications Technology; TBGI = Team-Based Goals and Incentives

[a] Because the two innovations focus on improving services at the community level, we did not conduct interviews with facility staff in the innovation blocks.

[b] Focus groups of husbands had an average of six participants; those with mothers-in-law averaged seven participants.

- **Interviews with pregnant women in their last trimester, mothers with newborns, and mothers with six-to-seven-month-old children.** We chose these three types of household respondents given the areas of focus of the interventions; IFHI and SDP focus broadly on health care for pregnant and lactating women and children under 12 months, but concentrate on services provided in the last trimester, the first month after the child's birth, and when the child is six to seven months old (when he or she should begin eating solid and semisolid foods). We asked household respondents about their interaction with FLWs, the information provided during any home visits, and the tools used to explain family health information.
- **Focus groups with mothers-in-law and husbands of women with children under 12 months.** To include as many respondents as possible in our focus groups, we recruited husbands and mothers-in-law of pregnant women in any trimester and women with children anywhere between 0 and 12 months of age, the broader group on which IFHI and SDP are focused. We attempted to get a sense of the attitudes of these household members and their roles in preparing for delivery, caring for the child, and making decisions regarding family planning.

In addition to these interviews, we also conducted various observations. For example, we attended a few subcenter platform meetings, observed skills trainings, and also sat in on a District Quality Assurance Cell meeting.[15]

Data collection and analysis approach. We developed detailed semistructured protocols for 17 respondent types based on a master list of topics—the list mapped intervention elements as well as themes and research questions across all relevant stakeholders. A joint team of Mathematica and Sambodhi staff conducted the interviews. Pairs of Sambodhi researchers and

[15] In addition to the semistructured interviews conducted by the field team, senior researchers also gathered information (on the same topics) from additional frontline workers and PHC staff as and when the opportunity arose in the field.

more junior "field executives" conducted all field interviews, of junior implementing partner staff, health workers, and beneficiaries, with Mathematica either observing or participating. Mathematica also interviewed all senior implementing partner staff at IFHI and SDP. We offered in-depth training to the interviewers on the specifics of the IFHI and SDP interventions as well as the goals of the study to ensure that they would be able to ask respondents targeted, context-specific questions. Interviewers recorded all interviews to prepare detailed write-ups of interview notes in a structured format developed by Mathematica.

To analyze the data we collected from interviews and focus group discussions, we mapped the study's key research questions across different intervention activities to generate topics and subtopics for analysis. We then segmented the interview notes by these domains across various stakeholders. This approach allowed us to triangulate information across districts and types of respondents. We were able to identify and generate findings that both represented how the interventions were being implemented and addressed the key research questions we identified.

E. Road map for the report

We begin by presenting the information we gathered on Ananya's community-level interventions, including enumeration and mapping, training and tools for frontline workers, and mass media and community mobilization. Chapter II describes these interventions in detail and provides an overview of how they were introduced into the field. Chapter III analyzes key successes and challenges in the implementation of these interventions and the implications for sustainability and scale-up. Chapter IV focuses on the facility-level interventions—that is, the quality- improvement process and skills training for nurses and ANMs. It describes intervention elements and how they were rolled out, and assesses which elements of implementation worked well, where there is room for improvement, and what that means for scale-up. Chapter V looks to the future. It summarizes plans for scale-up and offers high-level lessons on successes to replicate and barriers to prepare for while expanding Ananya to the rest of Bihar.

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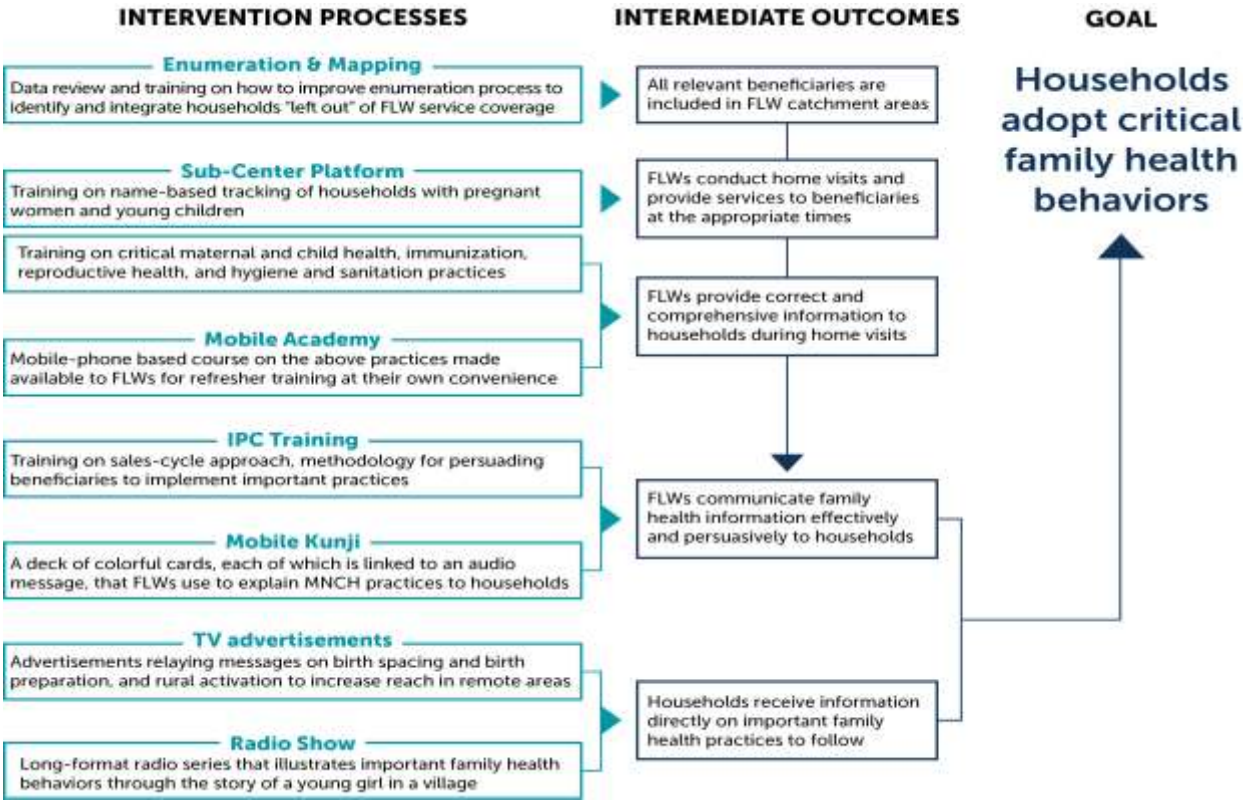
II. DEVELOPMENT AND INTRODUCTION OF IFHI AND SDP COMMUNITY-LEVEL ACTIVITIES

The IFHI and SDP programs work on both the supply and demand sides to improve key family health outcomes in Bihar. At the community level, an integrated set of interventions seeks to improve the coverage and quality of health care services provided by frontline workers and, simultaneously, increase awareness among households of available health care services and important family health practices. Three main types of community-level interventions have been rolled out in the eight focal districts, including: (1) efforts to improve the enumeration and mapping of FLW catchment areas, so that all potential beneficiaries are identified and linked to FLWs; (2) training and tools for frontline workers to improve their technical knowledge, communication skills, and ability to plan and track home visits and services; and (3) mass media and community-mobilization efforts to deliver family health messages to households. See Figure II.1 for a mapping of the intended path of the program at the community level.

Drawing on interviews with SDP and IFHI staff, this chapter provides an overview of each of these three sets of interventions and how they were introduced into the eight focal districts (setting the context for our findings in the next chapter on the implementation of these efforts). For each group of interventions, we provide a detailed description of grantee activities and follow with summary statements and narrative on (1) how programming was developed and introduced, and (2) the monitoring systems established by partners.

Figure II.1. IFHI and SDP community-level activities: Intended path of the program



A. Enumeration and mapping

One of the AWW's annual responsibilities is to conduct the mapping and enumeration of her catchment area, to collect basic demographic information on each household in her jurisdiction. In principle, the process involves the AWW drawing a map of all the structures and landmarks in her catchment area and maintaining a survey register. In this register—which she is expected to update as she receives new information—she lists basic details of household members, including name, birth date, gender, and marital status, as well as applicable information on deaths, disabilities, and migration.

When IFHI staff initially began their field work in the eight focal districts, they reviewed AWW survey registers to learn more about the makeup of the beneficiary population and the scope of FLW service coverage. Their early assessments showed, however, that survey registers, and accordingly the FLWs' service coverage, frequently excluded a number of households in the catchment area. In other words, there were households with eligible beneficiaries—pregnant women, lactating mothers, and young children—who were not being served by the ASHA and AWW in their area. IFHI sought to address this issue with a two-step process: first, identifying these "left-out" households using secondary data and survey register information, and second, linking these households to anganwadi center catchment areas (to which both AWWs and ASHAs are linked [or assigned]).

Once this comprehensive enumeration was completed, the program's vision was that it would be used for name-based tracking (described further below), so all relevant beneficiaries in an FLW's catchment area could be tracked systematically throughout the "-9 to 24 months" time line (from the first trimester of pregnancy until the child is two years old). IFHI created a transfer sheet for FLWs to systematically ensure that survey register information on pregnant women and young children is included in their home visit planners (registers that are used to schedule and plan home visits).

IFHI facilitated the process of identifying three types of households that had been "left out" of FLW services.

IFHI staff in the focal districts took a series of steps to identify households that had fallen outside of FLW coverage areas. First, they gathered all AWWs and used their existing survey registers to calculate the number of households in their catchment areas. They then compared those numbers with the (considerably higher) population figures specified by electoral or below poverty line (BPL) survey data from the District Rural Development Agency (DRD). The difference indicated the segment of the population left out of ASHA and AWW catchment areas (and therefore potentially not receiving their services).

Once IFHI staff had estimated the number of left-out households, they worked with the ASHAs and AWWs to identify them. Their strategy varied across the three types households that were identified as left-out households. First, entire *tolas* or hamlets (that is, areas of the village removed from the main settlement that are often occupied by those of lower or scheduled castes) were often omitted from the survey register. To identify these groups of households, CARE block coordinators asked the ASHA and AWW of each community to draw a map of their area and then sit together with their ANM to jointly identify hamlets that did not fall under any of

their areas of jurisdiction. Through this compare and contrast exercise, they were able to identify segments of the community that were not officially receiving FLW services.

Second, IFHI also designated as left-out any nuclear families that had not been identified as beneficiaries—mainly as a result of their details being buried in the mass of enumeration information of large extended families. As we heard from IFHI staff, when an entire housing structure was considered one household (the way beneficiaries were typically recorded in the survey registers), the pages of the survey register became inundated with information on members of large extended families and difficult to update with additional data. As a result, key updates such as pregnancies and births were often not included in the survey register. Thus, the new nuclear families in which these pregnancies and births were taking place were often not identified to receive FLW services.

To address this issue, IFHI redefined the household identified in the survey register as the nuclear family surrounding a *chulha* or kitchen, as opposed to the entire extended family living in a housing structure. The new approach (dividing these joint families into smaller households) ensured that there was enough space in survey registers for AWWs to add information on new pregnancies and births on an ongoing basis and make certain that those beneficiaries received key services.

Third, households that migrated to an FLW's catchment area after the previous round of enumeration could also have been left out, particularly if enumeration had been conducted some time ago. IFHI emphasized the importance of conducting yearly enumeration and mapping to ensure that such households got included in survey registers.

Overall, therefore, the mapping and enumeration effort helped identify households that would ideally be covered in the FLWs' catchment area but were omitted for one of the above-mentioned reasons.

To include left-out households in FLW service coverage, IFHI provided training on how to conduct mapping and enumeration to FLWs and passed information about left-out communities to ICDS, so new AWCs could be established.

Once left-out households and tolas had been identified, IFHI worked both at a high level with ICDS and also more directly with the FLWs to ensure that these families were integrated into service coverage. Once the data comparison of information from the updated survey registers was complete, IFHI assigned to AWWs the left-out households in or near their area. For those *tolas* that were not easily linked to an existing AWC, IFHI passed the information to ICDS to facilitate the process of eventually establishing new centers. This process may have merged with an institutional effort to build more AWCs; ICDS is attempting to ensure that there is one anganwadi center per ward, such that each AWC is not serving more than 1000 people. While awaiting the establishment of new centers, CARE staff worked with ASHAs and AWWs to ensure that left-out households were connected to services such as antenatal care (ANC) and immunization.

B. Training and tools to improve the knowledge and skills of frontline workers

The SDP and IFHI grants aim to increase the capacity of frontline workers by providing them targeted trainings on (1) technical family health information, (2) how to persuasively communicate that information to the relevant households, and (3) how to effectively plan and track their work such that households are regularly receiving the appropriate home visits and other services. SDP and IFHI also provide FLWs a host of tools to enhance these capabilities. These tools include a deck of cards containing family health information to be used jointly with a mobile phone-based audio messages (Mobile Kunji), sample medicines and supplies to be used as job aids during household visits, and paper-based registers to assist with planning. Below we describe the key components of each of these three types of training platforms and tools. We then explain how SDP and IFHI developed these intervention elements and introduced them into the field, and provide information on the systems they set up to monitor progress.

Improving FLWs' knowledge of technical family health information. At the core of IFHI's work at the community level is the subcenter platform. To ensure that FLWs have a more accurate and comprehensive understanding of the critical maternal and child health, immunization, reproductive health, and hygiene and sanitation practices that pregnant women and new mothers should be following, IFHI provides monthly trainings on these topics to ASHAs and AWWs at each subcenter. These meetings began in late spring 2012, with trainings focused on birth preparedness. They have since covered a range of thematic areas, including newborn care, breastfeeding and complementary feeding, family planning, and maternal health.

At the start of the rollout of the subcenter platform, facilitators employed by CARE led these monthly meetings. IFHI's intention, however, was that the meetings eventually be run by the ANMs. At the time of data collection, the facilitators were working to transition leadership of the subcenter platform to ANMs. IFHI's technical team develops a protocol for each month's meeting (usually in the form of a PowerPoint presentation). Meeting facilitators or ANMs use printouts of these slides to run the meetings and walk ASHAs and AWWs through the given topics (usually two or more thematic areas).

As part of the Ananya program, FLWs also have the opportunity to access refresher training at their own convenience. SDP has developed an audio training course called Mobile Academy that is delivered via IVR technology. This tool has nine chapters, each of which includes four 2.5-minute lessons and a quiz. Each lesson provides (1) an "argument," or strategy for effective communication, (2) a "message," or the details of the information that should be passed to the household, and (3) a "take-away," which is a couplet that frontline workers can use as a mnemonic device. Mobile Academy has 190 minutes of content and users pay 50 paise (0.8 cents) per minute out of pocket, a tariff established via agreements with the main telecommunications providers in Bihar. FLWs who achieve a score of 50 percent or above in the quiz receive a certificate of completion.[16]

Improving FLWs' communication skills. Complementing the technical instruction offered via subcenter meetings and Mobile Academy is training on how to communicate family health

[16] BBC Media Action. "Shaping Demands and Practices: Interpersonal Communication." January 16, 2013.

information more effectively to households. BBC provided a three-day interpersonal communications (IPC) training session to all ASHAs, AWWs, and ANMs in the eight focal districts, during which the FLWs were given guidance on how to communicate effectively with households, increase community awareness of available services, and persuade households to adopt critical family health practices. The core concept of this communications strategy was the sales cycle approach. This five-step technique uses a sales-driven methodology to encourage people to take important health-related actions, including building rapport with the household, understanding its needs, devising a solution, getting buy-in for the solution, and following up with the household to reinforce the solution.

The IPC training also introduced BBC's main technological job aid for FLWs, the Mobile Kunji (see Figure II.2). This tool has two components: (1) a deck of plastic cards (held together by a ring) that illustrate important practices to follow during pregnancy and early childhood, and (2) short codes (which are short telephone numbers) to dial in to a series of audio recordings delivered by Dr. Anita, a fictional character created by BBC. Both components reinforce the same messages. Each card has colorful pictures on one side, as well as some basic language explaining a particular health practice. On the other side, bullet points summarize the main information related to that practice that the FLW needs to pass to the household. During the home visit, the FLW would, as BBC envisions it, hold up the card with the picture facing the beneficiary. She would then reference her "notes," or "cheat sheet," on the other side while explaining the importance of a practice or what steps to take. The FLW can access the relevant audio message (usually of about one and a half minutes) by placing a call to the short code at the bottom of each card. BBC has worked with cell phone providers Airtel, Vodafone, Reliance, Tata, Idea, and BSNL to set the price for these calls at 40 paise (0.6 cents) per minute. Charges are currently covered by Ananya (so that FLWs do not have to pay for the calls) but will eventually be transferred to the government.[17]

IFHI also provides frontline workers with a "job aid kit" to help them communicate with households (see Figure II.3). This kit is a bag containing items that FLWs can use or show women during home visits to explain MNCH information. Items include a *katori* or bowl, a spoon, a model of a uterus, a Copper-T IUD, a strip of Mala-D (an Indian brand of oral contraceptive), a sachet of oral rehydration salts (ORS), a strip of iron/folic acid (IFA) tablets, soap, a blade, thread, a measuring tape, a nail cutter, and a calendar. The bag also contains things that can make the FLWs' home visits easier, such as a mat to sit on and an umbrella to use while commuting during the rainy season. Finally, the kits include six wall stickers (small forms or checklists to be stuck on the doors or walls of visited households) and a permanent marker. For instance, on the ANC wall sticker, an FLW would indicate the number of tetanus toxoid (TT) injections and ANC checkups that the pregnant woman in that household has received.

[17] FLWs may also be provided around 40 free minutes based on the service provider. BBC Media Action. "Shaping Demands and Practices: Interpersonal Communication." January 16, 2013.

Figure II.2. Mobile Kunji

Improving FLWs' capacity to plan and track home visits and other services. With technical knowledge and communication skills, FLWs should be better prepared to provide accurate and complete information to households and communicate that information effectively. However, these skills can effect wide-ranging behavior change and improved practices only if FLWs are conducting visits to all eligible beneficiaries at appropriate times. IFHI's name-based tracking activity targets this need. By giving FLWs the tools and training they need to plan their schedule for home visits and other services, IFHI seeks to ensure that the information it is providing to the FLWs reaches the beneficiaries and households when it is most needed.

The key tool for improving the number and timing of visits is the home visit planner (see Figure II.4). IFHI developed this register to facilitate the detailed name-based tracking of each woman from the time she registers her pregnancy until her child is two years old.[18] The planner specifies how many times a household should be visited during pregnancy and after the birth of the child, and provides a format in which FLWs can build a schedule for visits and record visit dates. It is meant to encourage ASHAs and AWWs to build and follow a timely schedule for home visits and coordinate more effectively with each other.

[18] When CARE first established a presence in the eight focal districts, its officials were told there were several forms of home visit registers available to frontline workers. However, their exploratory research in the field did not uncover any formalized registers that would allow ASHAs and AWWs to make a detailed plan for home visits tied to critical stages in pregnancy and early childhood. Therefore, they refined for use in Bihar the ICDS MIS register (which they had originally helped develop and was approved by the national government, but not launched in Bihar).

Figure II.3. Job aid kit and contents

1. Job aid kit

2. Disposable delivery kit

3. Contraceptive pills

4. Cup and spoon

5. IFA tablets

6. Copper T IUD

7. Model of uterus

8. Packet of Oral Rehydration Salts

9. Wall sticker (0-7 Days)

10. Wall sticker (2-6 months)

Figure II.4. Home visit planner

In addition to tracking home visits, name-based tracking also includes the monitoring of important services that pregnant women and young children should receive. These services include TT injections, IFA tablets, and ANC checkups for pregnant women, and the entire set of vaccinations for children under 24 months. The main tools to be used to track these services are the pregnancy and immunization (or due list) registers.

Name-based tracking is a critical area of focus during subcenter meetings. In addition to providing instruction on technical topics and important family health practices, meeting facilitators also explain at what times it is most important to conduct home visits. The meetings also cover in detail the use of the planners. Facilitators train FLWs in how to schedule and track visits in the planner and review FLWs' new entries in the planner since the previous meeting.

IFHI and SDP engaged closely with government staff to obtain their approval to organize subcenter and IPC trainings.

IFHI and SDP staff worked closely with the government to facilitate the rollout of the subcenter trainings and IPC trainings. Though each of their time lines was slightly different, they took several of the same steps to engage government staff. First, IFHI and SDP senior staff sought approval for rolling out the interventions from the State Health Society (SHS) of Bihar. Once the SHS communicated with district government officials about the Ananya program and asked them to work with implementing partners as needed, IFHI and SDP district staff look the lead on government engagement. They met with key district officials, including the district magistrate, who is the chairman of the district health society (DHS); the civil surgeon, who is the member secretary of DHS; as well as other key players, such as the district program manager of NRHM and the district program officer (DPO) of ICDS. Their end goal was to have these district staff issue directives to block-level functionaries who oversee the work of AWWs, ASHAs, and

ANMs. The rollout time lines varied between the health division and ICDS. There were some delays in ICDS approvals, especially for SDP's IPC trainings.

Once block-level government staff received these orders, CARE block coordinators and Pathfinder community coordinators took the lead on the microplanning for subcenter meetings and IPC trainings. They met with the MOIC and block health manager (BHM) at the PHC, as well as the relevant CDPO, to introduce the program, obtain their support, and learn about potential schedule conflicts in each area. Conflicts could include pulse polio days,[19] the monthly block-level meetings held for ASHAs and AWWs, days on which take-home rations are typically distributed, and other events. On that basis, IFHI identified a set day for the monthly meeting at each subcenter in the block (for example, the second Wednesday of each month), and SDP identified a three-day window when FLWs would be available for the IPC training. SDP took one extra step at the block level (usually before the microplanning). In addition to meeting with local health and ICDS officials, SDP staff also conducted a "sensitization" on the Ananya program and its potential benefits for heads of Panchayati Raj Institutions (elected local government).

IFHI's technical team develops the content for subcenter meetings and offers a monthly training to its subcenter meeting facilitators.

The state-level technical team creates the content of the subcenter meetings. Once they finalize the material for each month, they pass it on to all districts. IFHI district staff then organize a two-to three-day training on that theme at the beginning of the month for all of the block coordinators and meeting facilitators in their area. The meeting facilitators, hired by IFHI, typically hold a bachelor's degree and have good communication skills, and the ability to lead meetings and teams. The training sessions that facilitators attend, according to IFHI district staff, are designed to both provide comprehensive technical information and develop their interpersonal communications skills, including how to present and explain information to FLWs, how to maintain good body language, and how to discuss sensitive topics. IFHI administers regular written tests to gauge the skill level of the facilitators. Weak facilitators may be asked at the training session to demonstrate how they would lead a subcenter meeting, and then receive feedback on their performance. High-performing facilitators are sometimes given the selected theme for the month one or two days in advance of the training for trainers and asked to lead the session.

IFHI allocates meeting facilitators to subcenters based on their level of performance.

The IFHI district outreach officer is responsible for allocating trainers to subcenters (with one trainer for 8–10 subcenters). He divides the trainers into four categories—A through D—with A being the strongest and D the weakest. They are then matched up with subcenters on the basis of their skill level. The highest performing facilitators are assigned to subcenters where the ANM's skill level is particularly poor or where there are other barriers. The lowest performing facilitators may be sent to subcenters where, for instance, the ANM is strong and motivated and can lead some of the sessions.

[19] Under the government's Pulse Polio Immunization (PPI) program, health workers go door to door to administer doses of the oral polio vaccine (OPV) to all children under five.

SDP held a four-day training of trainers for the IPC meeting facilitators.

The SDP program conducted an in-depth preparation program for all IPC trainers. Pathfinder took the lead on recruiting these trainers, advertising job postings and interviewing and selecting approximately 120 candidates. Senior staff from BBC and Pathfinder trained these 120 candidates in four groups in April 2012. During these sessions, they observed the candidates' performance and trimmed the pool to 20 individuals from each group (a total of 80 candidates), with equal numbers of men and women.

SDP developed a detailed curriculum for the three-day IPC trainings that aimed to introduce new concepts and tools to participants in ways that excited enthusiasm and maintained interest.

SDP developed a curriculum for the IPC trainings that provided detailed content for each session on each of the three days. It also included suggestions for how to motivate participants and convince them of the importance of IPC, as well as instructions on how to integrate interactive activities into the sessions. On the first day of the training, trainers introduced ASHAs and AWWs to the Ananya program and to the concept of behavior change. They explained that IPC was a tool to influence household behaviors and described the sales cycle approach. At the end of the day, they demonstrated the use of the Mobile Kunji. However, to ensure that all participants returned for day two of the training, they asked FLWs to return the cards before they left for the day and promised to explain the following morning how to use them.

The second day of the training provided detailed instructions on how to use the Mobile Kunji—including how to display the cards, play the audio messages, and choose the card based on the audience. Trainers emphasized that it was important to use both the cards and audio messages during all visits. The final session on the second day introduced Mobile Academy. It explained to FLWs the structure of the lessons, chapters, and quizzes, and that they could disconnect in the middle of the course and pick up where they previously ended the next time they dialed in. The third day of the training was devoted entirely to role plays and practice. ASHAs and AWWs had the opportunity to implement what they had learned over the two days.

SDP and IFHI collect monitoring data on all key intervention activities.

SDP and IFHI gather management information systems (MIS) data on critical elements of their interventions, tracking key inputs, the completion of intervention activities, as well as basic outputs. Below we describe the types of data collected as well as the main sources on which grantee rely. We explore how grantees use these data in Chapter III.

For its mapping and enumeration exercise, IFHI collected information on the number of blocks, villages, and anganwadi centers; the number of left-out households identified; the number of those households linked with an anganwadi center in their area; and the number of households that were still not attached to any anganwadi center.[20] For its subcenter meeting platform, it gathered data on the number of meetings conducted each month, FLW attendance, and other factors. IFHI relies on a variety of sources to collect its MIS data. Sources include the

[20] Integrated Family Health Initiative. "Monitoring and Evaluation Data: Indicators, Data Sources, and Data Usage." Presented at an Ananya MLE Workshop, New Delhi, India, October 20, 2011.

village-level mapping and enumeration format, subcenter platform meeting register, monthly reports of block coordinators, and registers maintained by FLWs.

SDP tracks similar types of information related to its activities. To monitor the implementation of its IPC trainings, it collects information on the number of trainings conducted and the number of FLWs who attended. To get a sense of the usage of the Mobile Kunji, it gathers information on how many unique users dial in on a monthly basis, what messages they dial in to least frequently, how long each "call" to the application lasts, and more. Similarly, SDP obtains information on Mobile Academy reach and use, as well as the progress of FLWs through the chapters and the rate of course completion. In addition, SDP gathers MIS data on its mass media campaigns and community mobilization activities. It tracks exposure to the radio and TV programming, the number of van mobilization events, and more. Finally, SDP also developed monitoring indicators for coordination with the government and other partners. It tracks the number of meetings with the department of health and ICDS and the number of Ananya District Program Management (ADPMU) meetings. SDP relies on a variety of data sources for its monitoring work. It pulls from media monitoring reports from a media agency, training reports, and reports from the MoTech and OnMobile platforms that support the mobile phone applications.[21]

SDP and IFHI staff observe home visits to monitor how FLWs are implementing the knowledge and skills they acquired during subcenter meetings while interacting with households.

SDP staff conduct structured observations of FLW home visits with the goal of collecting real-time input on how well FLWs have internalized IPC concepts and are integrating them into their discussions with households. They provide feedback to individual FLWs they observe and also track common areas for improvement across all FLWs. We describe below the process of planning and conducting observations. Chapter III provides additional detail on how implementing staff shared feedback with FLWs.

SDP district staff have had the primary responsibility for home visit observations thus far. Each month, district coordinators and community supervisors randomly select 23 FLWs and observe two visits conducted by each of those FLWs. These home visit observations are structured. District staff use a formal checklist to track the use of the sales cycle approach, Mobile Kunji, and other job aids; the comprehensiveness and accuracy of the shared information; and a series of other qualitative factors, including whether the FLW was polite, whether she allowed the client to express her opinion, and whether she assured the client of the confidentiality of the conversation.[22]

In addition to the above field visits by SDP district staff, block-level community coordinators also conduct home visit observations (see Figure II.5). Community coordinators originally conducted fewer observations, and these visits were less formal. However, as of

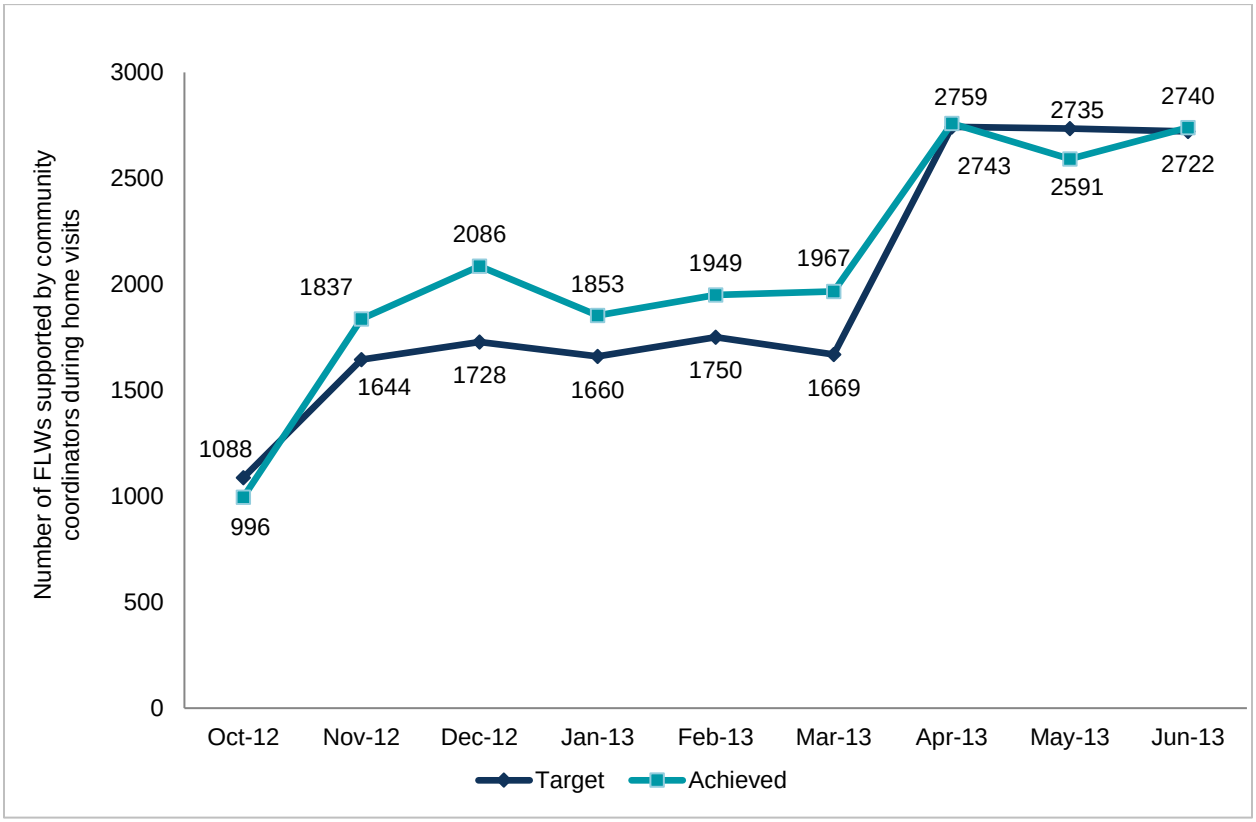
[21] BBC Media Action. "Shaping Demand and Practices: MIS." Presented at an Ananya MLE Workshop, New Delhi, India, August 4, 2012.

[22] BBC Media Action. "Observation Checklist: Monitoring FLW's Interaction with Beneficiaries." Unpublished document, 2011.

summer 2013, SDP increased the required number of observations from 12 to 20 each month (10 for ASHAs and 10 for AWWs). It introduced a new method for selecting the FLWs for observation as well as a checklist (similar to the one used by district staff but more focused on usage of tools).

This new selection method is intended to identify FLWs who were weaker or struggling to implement IPC concepts and provide them targeted assistance. SDP has segmented FLWs into three categories—good, average, and weak—based on information obtained from FLW performance at IPC training, their use of the Mobile Kunji, and their attendance at the subcenter platform meetings. Community coordinators focus more of their efforts on the weaker FLWs; they conduct 20 percent of their observations with FLWs in the good category, 40 percent with those in the average category, and another 40 percent with those in the weak category.

Figure II.5. Home visit observations by SDP block staff



Source: BBC Media Action. "Ananya MIS 2013: Q4 (2012) & Q1, Q2 (2013) analysis." August 2013.

IFHI staff also conduct home visit observations, but do not have strict quotas to meet or a structured format to follow. CARE requires that its block coordinators conduct regular field visits. As part of this approach, many also conduct home visit observations. The frequency of these observations varies by individual, with some conducting one to three observations each time they visit a village and others conducting a couple of home visits each month. The block coordinators we interviewed report that they provide input to FLWs on how they frame the conversation, use tools, and interact with the beneficiaries, and how they use the home visit planner.

IFHI administers the LQAS to households quarterly, to monitor their uptake of practices recommended by frontline workers.

IFHI conducts a Lot Quality Assurance Sampling Survey (LQAS) to collect ongoing information on MNCH practices that households follow and on services they have received from FLWs. Specifically, it assesses whether indicators are reaching benchmarks at the block level, and measures coverage rates for these indicators by aggregating the block-level results to the district and project levels. IFHI uses these survey results in two ways. First, it looks to these quarterly numbers to track in real time how well FLWs are implementing what they learn during trainings and to identify where they need additional assistance. Second, it attempts to use the survey results to facilitate data-driven management. That is, by sharing real-time coverage data with government officials, it aims to induce them to take targeted actions to improve the services provided by FLWs.

IFHI has put in place a specific protocol for the rollout of LQAS. Each quarter, it requires each block coordinator to conduct interviews with 19 households in each of the four following categories: women with children of 0–2 months, 3–5 months, 6–8 months, and 9–11 months. Typically, the coordinators go to six households of each type in the first month, seven in the second, and six in the third.

The district staff oversee the sampling process, and have tried to ensure that the sampling of communities is done randomly in each block. Each block coordinator receives a list of all the subcenters in his block and the number of households to interview in each subcenter. For instance, if a subcenter is marked with the number 2, the block coordinator would conduct two interviews in each of the four household types in an AWC in the subcenter catchment area. Typically, for each subcenter, the block coordinator pulls up a list of all the AWCs it covers (on the Blackberry that CARE has given him), organizes it in ascending order, and then uses a random number generator to select an AWC. He then meets with the AWW of that subcenter and uses her survey register to tally how many households are in the AWC catchment area. Again using a random number generator, he selects a household from the survey register, and then goes to the tenth home to the right of that structure to start the listing and interviewing process.

To each selected household, the block coordinators administers a basic listing to determine whether it includes a child under one year. If there is a child in that age range, he asks for a health card or any other proof of the date of birth.[23] If there is no child under one in that household, he continues to the next household until he identifies and conducts interviews with households with children of all four age groups. Once he has completed the full household survey, he enters the responses to 15–20 questions in each of four questionnaires into an electronic file that he transmits on the same day to the CARE district office server. He also shares with district staff completed hard-copy questionnaires that are eventually compiled in full by the IFHI evaluation staff.

[23] The block coordinator does not conduct the interview if the household does not have any documentation on exactly when a child was born.

C. Mass media and community mobilization

The Ananya program also aims to reach important MNCH information directly to households via nonhealth system channels. Through mass media and community-mobilization interventions (led by SDP), it hopes to increase households' awareness of important maternal and child health and hygiene and sanitation practices. Similarly, it seeks to raise awareness of services available to households, thereby increasing the accountability of government health workers.

Radio programming. One of SDP's mass media programs is a 36-episode long-format radio show called *Khirki Mehendiwali*. It tells the story of a young girl named Mehendi as she negotiates day-to-day challenges rooted in poverty, illiteracy, and low female empowerment, all of which ultimately influence health care decisions and choices. Three 15-minute episodes are broadcast each week, with all three playing each weekend. Each episode follows a set structure, starting with an introduction by Mehendi, who is now a radio DJ in Patna looking back on her life in the village. The show is designed to appeal to rural populations. Each episode includes a joke made by a comic character, a song in a local dialect, a narrative surrounding the drama, and a message from Dr. Anita (a character who also voices the Mobile Kunji's audio messages).[24]

Television programming. SDP has also launched two television advertising campaigns. One is called *Ek Teen Do*, or "One Three Two," which emphasizes the importance of birth spacing—that is, ensuring that there are three years between first and second children (see Figure II.6). The other is *Chaar Gaanth*, or "Four Knots," which illustrates the four key steps of birth preparation. These advertisements were broadcast throughout the state, in both focal and nonfocal districts.

Figure II.6. *Ek Teen Do* birth spacing message

Source: BBC Media Action. "Ad Campaign: 'Ek Teen Do'." Available at [http://www.rethink1000days.org/programme-outputs/ad-campaign-ek-teen-do/]. Accessed January 16, 2014.

Community mobilization. To extend the reach of its radio and TV programming, SDP has undertaken community-mobilization efforts. These programs include "radio listener clubs" (self-help groups that play and discuss episodes of Khirki Mehendiwali), street theater performances that communicate health messages, and a mobile van campaign to further disseminate the *Chaar Gaanth* television advertisement. Most recently, it has launched an ICT tool—the Kilkari Family Time Line Service—to reach out directly to household targeted beneficiaries. With Kilkari, households can register to receive weekly recorded messages that remind them of important practices to follow during pregnancy and after the birth of the child. At the time of data collection, radio listener clubs were active in only a few districts and blocks, the street theater

[24] BBC Media Action. "Concept Note: Khirki Mehendiwali." April 17, 2012.

performances had only recently been introduced into the field, and Kilkari had not yet been launched. Therefore, of the community-mobilization activities, we focused on only the van-based rural activation effort initiative for this study. SDP had deployed mobile vans to cross six of the eight focal districts and screen the birth-preparation advertisement for households in remote villages. Facilitators at these gatherings conduct activities to engage spectators and ensure that they are retaining the information.

SDP conducts its rural activation campaign in particularly disadvantaged communities that have limited access to media.

SDP has outsourced the execution of its rural activation campaign to a company called Platinum. The facilitators employed by this firm travel to the selected village, talk to local leaders and the ASHA and AWW to introduce the Ananya program, and solicit their assistance in gathering a crowd. Once a group is assembled, they present a short street play and then screen the *Chaar Gaanth* birth-preparation television advertisement four times. They conclude the presentation with a quiz on the key practices covered in the advertisement and distribute rewards to participants who answer the questions correctly.

SDP used two key criteria to determine where to send its mobile vans to screen the *Chaar Gaanth* video. First, in each block in each of the eight districts, it selects two communities with large Dalit and Mahadalit populations (scheduled caste groups that are particularly disadvantaged), one of which is close to the PHC and one of which is not (to ensure there is variation in the remoteness of the communities). In some districts, SDP also considers where its street theater performances have taken place in selecting its rural activation locations.

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III. COMMUNITY OUTREACH: SUCCESSES AND CHALLENGES IN IMPLEMENTATION

Having understood the scope, structure, and aims of the community-level interventions led by SDP and IFHI, and the steps taken to roll out and monitor these efforts, we sought to gain insight into the key successes and challenges related to their implementation, as well as any implications for sustainability and scale-up. To achieve this goal, we spoke with a range of stakeholders, including frontline workers, pregnant women and new mothers, husbands and mothers-in-law of pregnant women and new mothers, and program staff at both the district and block levels. This chapter presents our findings from those interviews. It explores in sections A through D: (1) the extent to which FLWs were able to identify left-out households and include them in their services via new enumeration and mapping procedures; (2) how effectively trainings were organized and administered and FLWs' recall of topics that were covered; (3) how well FLWs were able to apply training content while planning and conducting home visits; and (4) the extent to which households had heard and understood family health messages in Ananya's radio and TV programming. In each section, we also include findings on any parallel programming taking place in nonfocal districts and describe the coverage and quality of services offered by FLWs who do not have access to Ananya training and tools. We hope to provide insight into what sets Ananya offerings apart from other instruction and assistance that FLWs are receiving and offer a preliminary look at the condition of family health services in the areas to which Ananya will be scaled up.

Key findings from this chapter

- ASHAs and AWWs understood the importance of (and approach for) identifying left-out households and integrating them into their service coverage through improved enumeration and mapping.
- FLWs were appreciative of the training they received through the subcenter platform and exhibited a high level of recall of the technical health information shared during the meetings.
- FLWs were conducting home visits more frequently than they had in the past and were sharing information with households about several important MNCH practices.
- However, low levels of literacy among FLWs posed a barrier to Mobile Kunji use during home visits.
- FLWs had difficulty understanding how to use the home visit planning tool and did not closely follow the recommended schedule for home visits.
- There are still gaps in ANM leadership—most are leading only sessions of the subcenter meetings and lack the confidence and ability to facilitate entire meetings. Their level of engagement is also limited given their heavy immunization-related workload.

A. Linking all beneficiaries to frontline workers through enumeration and mapping

Prior to initiating its key intervention activities targeted at improving FLW knowledge and skills, IFHI wanted to ensure that all households in the eight focal districts were attached to an ASHA and AWW (so that they could benefit from improved FLW services). To accomplish this goal, IFHI used existing data and worked with both frontline workers and government officials to identify households that had been left out of ASHA and AWW services and link them to anganwadi center catchment areas. Below, we present our findings on how effectively these efforts were implemented.

Around half of the ASHAs and AWWs found left-out households as a result of conducting a *chulha* (kitchen)-based enumeration survey.

Most ASHAs and AWWs we interviewed had grasped the concept of left-out households and understood the strategies recommended by CARE for identifying the three types of left-out households and integrating them into service coverage. Seven out of the 15 ASHAs and AWWs we interviewed said they were now restricting the survey unit to a *chulha*, or kitchen (which is the base for a nuclear family), instead of an entire structure (that houses the extended family). As a result of this revised approach, they reported identifying between 4 and 10 "new" households in their most recent survey.[25] We did not hear any reports of the two other types of left-out households in our interviews; that is, the ASHAs and AWWs we interviewed did not mention identifying any recently migrated households in their areas or adding new *tolas* (hamlets) to their survey registers.

The FLWs we interviewed noted that while they separated out nuclear families from large extended families upon CARE's instruction and tracked the enumeration details of each nuclear family separately, they had already been providing services to these smaller household units before changing the survey methodology. This case was particularly evident for immunization and family planning services—all FLW respondents who identified left-out households noted they had already been offering these services to the "new" families. Some even said they had provided these households with take-home rations of grain, which are usually restricted to a limited and predetermined set of households listed in the survey register. This finding suggests that beneficiaries in new or additional *chulhas* may already be included in FLW rosters (if informally) and receiving at least some of the relevant FLW services.

FLWs have a varying understanding of how frequently to conduct enumeration.

One way to ensure that fewer households are left out of FLW coverage is to conduct enumeration and mapping regularly. IFHI follows ICDS guidance and advises FLWs to conduct a full survey of their catchment area annually, while including updates on an ongoing basis throughout the year. However, FLWs have varying understanding of the appropriate level of frequency for the enumeration surveys. Some AWWs and ASHAs reported conducting a round of enumeration very recently (for example, January 2013), which means they conducted at least one follow-up to the original CARE-facilitated mapping and enumeration effort in late 2011 or early 2012. Others seem to view this enumeration process more as a one-off initiative and have

[25] According to our AWW baseline survey, anganwadi center catchment areas typically serve around 1,200 people.

not completed any full surveys since they were asked to do so by CARE. Only one FLW in our sample reported updating her survey register between rounds of full enumeration and mapping.

Enumeration and mapping in nonfocal districts is similar, with FLWs also conducting *chulha*-based surveys and discovering left-out households as a result.

ASHAs and AWWs in nonfocal districts are collecting similar information in their enumeration surveys. In their survey registers, they list the names of the head of household and other members, the gender and age of each household member, and in some cases educational level and pregnancy status. Similar to what we found in focal districts, around half of the ASHAs and AWWs we interviewed in nonfocal districts were collecting enumeration data by conducting *chulha*-based surveys. A few reported discovering families who had recently migrated to the area in their last round of enumeration. Frontline workers are providing most services to these households, including immunization, preschool education, antenatal care (ANC) checkups, and counseling visits. They are not providing rations to these families (most likely, as explained above, because there are strict quotas on how many households can receive rations).

B. Trainings to improve the knowledge and skills of FLWs

At the core of the IFHI and SDP interventions are in-depth trainings for frontline workers. Subcenter meetings and IPC trainings aim not only to extend FLWs' knowledge of critical MNCH practices, but also to enhance their ability to translate that technical information into persuasive messages for households. In the previous chapter, we discussed the content of the subcenter meetings and IPC trainings and described how they were rolled out. Below, we take a more analytical lens—highlighting areas where the implementation of the trainings was particularly effective, and also areas where it was less successful. We focus on findings related to training on (1) technical family health information to pass to households during home visits, (2) interpersonal communication with households during home visits, and (3) planning and tracking home visits and other services. We then discuss issues related to sustainability and scale-up, mainly the leadership of these meetings and trainings and how they are scheduled and organized.

1. Trainings to improve FLWs' knowledge of technical family health information

There was a high level of recall of subcenter meeting content on birth preparation, breastfeeding, and family planning.

As explained above, IFHI has developed a detailed and comprehensive curriculum for subcenter meetings that covers the various technical topics related to family health. Several FLWs were able to recall specific practices under each domain of family health. We first offer below a comprehensive list of the practices and procedures that ASHAs, AWWs, and ANMs cited when we asked them what was covered by the trainings they received. We then discuss any variation in recall across family health domains and practices.

- **Antenatal care:** eating vegetables, meat, and fish; drinking cold milk; receiving TT injections; getting pulse and blood pressure checked; resting for two hours during the day; and registering pregnancy
- **Birth preparedness:** saving money; keeping a clean cloth, blade, thread, needle, and soap ready; keeping contact numbers for an ambulance and ASHA ready; identifying a health facility for delivery; identifying a woman's blood type and a person with the same blood

type to accompany the woman to the facility; and cleaning the house and disposing of any sewage

- **Danger signs during pregnancy and delivery:** swelling of hands and legs, excessive bleeding, labor for 12 hours or more, and fetal position
- **Newborn care:** initiating breastfeeding within one hour after birth (with one mentioning initiating breastfeeding within five minutes of birth); positioning baby for breastfeeding; frequency of breastfeeding; exclusive breastfeeding; not giving the baby any water; kangaroo care; leaving the umbilical cord dry; caring for weak newborns; and washing hands before handling baby
- **Complementary feeding:** feeding the child two to four *katoris* a day of khichdi, halwa, dal, or chawal that has been mashed, does not have any spices, and has been cooked at home; feeding the child meat, eggs, and fish; continuing breastfeeding; measuring the child's weight to monitor child's growth; and washing hands before feeding the baby
- **Immunization:** BCG, polio, DPT 1, DPT 2, and hepatitis
- **Family planning:** temporary methods, such as IUDs (Copper-T), oral contraceptives (Mala-D and Mala-N), and condoms; permanent methods, such as sterilization; maintaining a gap of two to three years between children; participation in sterilization camps, which take place every Tuesday and Thursday; and counseling couples with more than two children
- **Infectious diseases:** symptoms and conditions of prevalence of Kala Azar (visceral leishmaniasis)

Some FLW respondents were able to name several of these domains, and several practices within each domain. However, others remembered only one or two domains and—under each of those—only one or two practices. This holds for ASHAs and AWWs as well as ANMs (who generally did not show a higher level of recall than ASHAs and AWWs).

Of the above elements, FLWs most frequently mentioned birth-preparation steps, breastfeeding practices, and family planning methods. A relatively high number said the meetings covered complementary feeding. Only one-quarter of the FLW respondents reported hearing about antenatal care practices. These topics align with material that IFHI reports covering during the subcenter platform trainings. Overall, respondents seemed appreciative of the trainings. One program staff respondent said, "Despite the fact that the subcenter meetings do not offer incentives to entice FLWs to attend meetings, FLWs generally attend meetings regularly because they find them interesting and useful."

"Despite the fact that the subcenter meetings do not offer incentives to entice FLWs to attend meetings, FLWs do participate regularly because they find the meetings interesting and useful."

Respondents said they were asked to emphasize pregnancy care and infant feeding in discussions with mothers-in-law and birth preparation and family planning in discussions with husbands.

A key element of the Ananya program logic is the belief that bringing husbands and mothers-in-law, who are key power brokers in the household, into the conversation can help ensure that families adopt important health practices. By making these key family members aware of available services and the importance of following vital family health practices, it hopes to wear down some of the opposition that women may face in making certain preparations for delivery and caring for their children's and their own health.

Subcenter meetings seem to have emphasized the importance of communicating with husbands and mothers-in-law. Respondents reported that for their discussions with mothers-in-law, they were told to focus specifically on how to care for the pregnant woman (for example, ensuring that they maintain a healthy diet with green vegetables and milk and that they get a lot of rest) and infant feeding (for example, immediate and exclusive breastfeeding and complementary feeding). With husbands, they said they were asked to focus on family planning and birth preparation (for example, arranging for transportation to the facility, choosing a facility, and making financial preparations).

Logistical and technological challenges, as well as some level of confusion about the fees associated with the tool, might be adversely affecting the use of Mobile Academy.

The other option FLWs have for sharpening their skills and improving their technical knowledge under Ananya is the Mobile Academy IVR course offered by SDP. In our sample, however, only a small fraction of the ASHAs and AWWs we interviewed had registered for Mobile Academy and begun working their way through the chapters. Only three had completed the course in its entirety. It is important to note that our sample of ASHAs and AWWs was small, and its low levels of Mobile Academy use may not be representative of trends in the entire population of FLWs that received IPC training (during which Mobile Academy was introduced). The MIS data, which BBC collected, tell a slightly different story. According to those records, a cumulative 25 percent of FLWs had completed the course by June 2013 (see Figure III.1).

Of those in our sample who had begun dialing in to the course, several said they found most helpful the chapters on family planning, preparation for delivery, and newborn care. One respondent also noted that she learned about important practices in more detail than she had in previous trainings. For example, she mentioned that although she knew that a baby should be fed only breast milk for the first six months, she had not known that breastfeeding should begin within five minutes of birth (as specified by the course).

We spoke with Pathfinder community coordinators, who are SDP block-level staff, to learn more about FLW reactions to Mobile Academy. Their interviews provide some insight into why usage is not higher. They mention that several ASHAs and AWWs had changed their mobile phone numbers or lost their phones, and so have to be re-registered before they can dial in to the course.

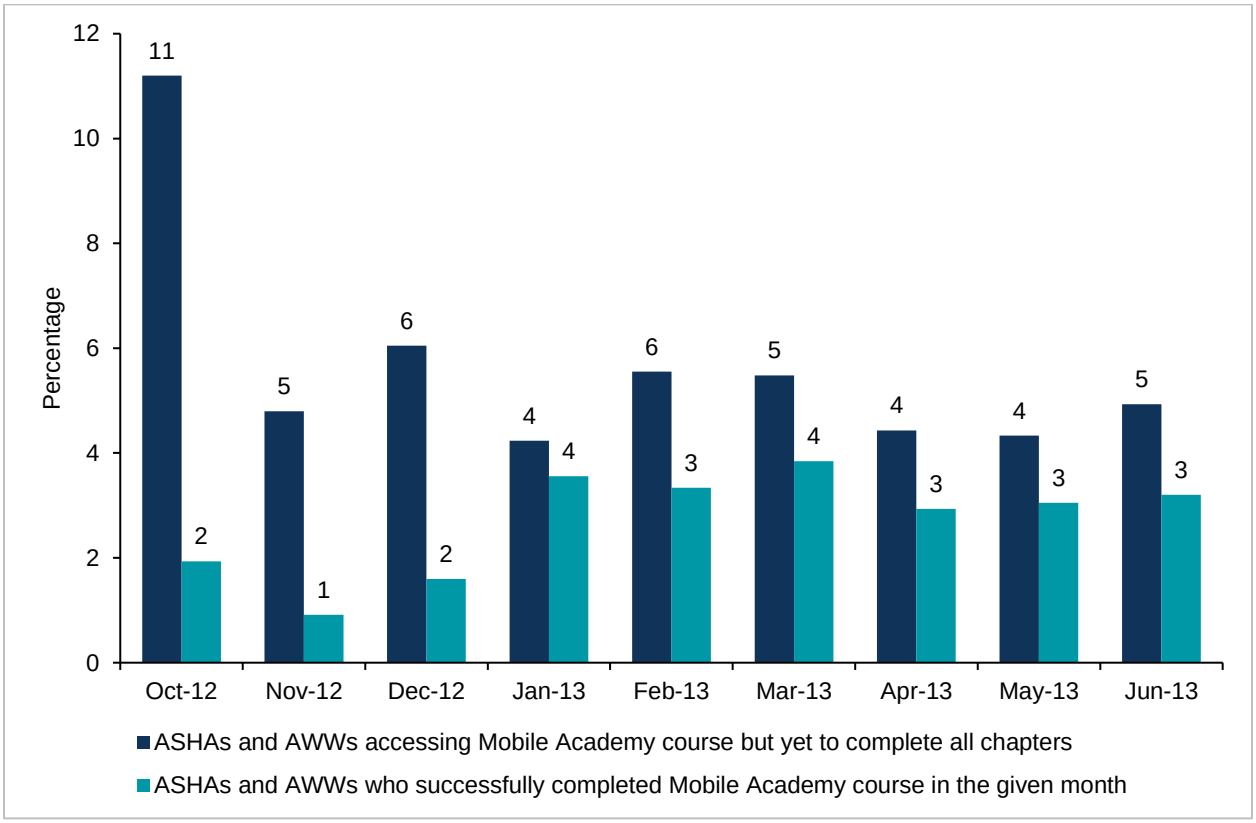
In addition, connectivity may be poor in more rural areas, and some FLWs who live close to Uttar Pradesh (the neighboring state) may fall under non-Bihar networks and therefore be unable to access the service.

There are also IVR-related challenges. Almost all Pathfinder community coordinators mention a problem with bookmarking. That is, when the connection drops and FLWs dial in to the course again, the program does not pick up where it ended (as it is supposed to) but reverts to the beginning of the course. Some FLWs also face difficulties in understanding the audio instructions—for example, how to move from one module to the next.

Confusion about the costs of Mobile Academy may also affect whether FLWs choose to dial in to the tool. When asked to tell us the fee for using Mobile Academy, our respondents cited figures ranging from Rs. 50 to Rs. 200 (a significant difference for poor families in Bihar), when, in fact, the total charges sum to Rs. 95. Uncertainty about the cost of the course may well be linked with low usage. FLWs may be disinclined to dial in to Mobile Academy if they are worried that the tool could use up precious prepaid call time.

Finally, our observations suggest that literacy may also influence how widely the tool is used. The same reading and writing problems that discourage ASHAs and AWWs from using Mobile Kunji (discussed further below) may also act as a roadblock when it comes to some FLWs' use of Mobile Academy.

Figure III.1. Monthly use of Mobile Academy



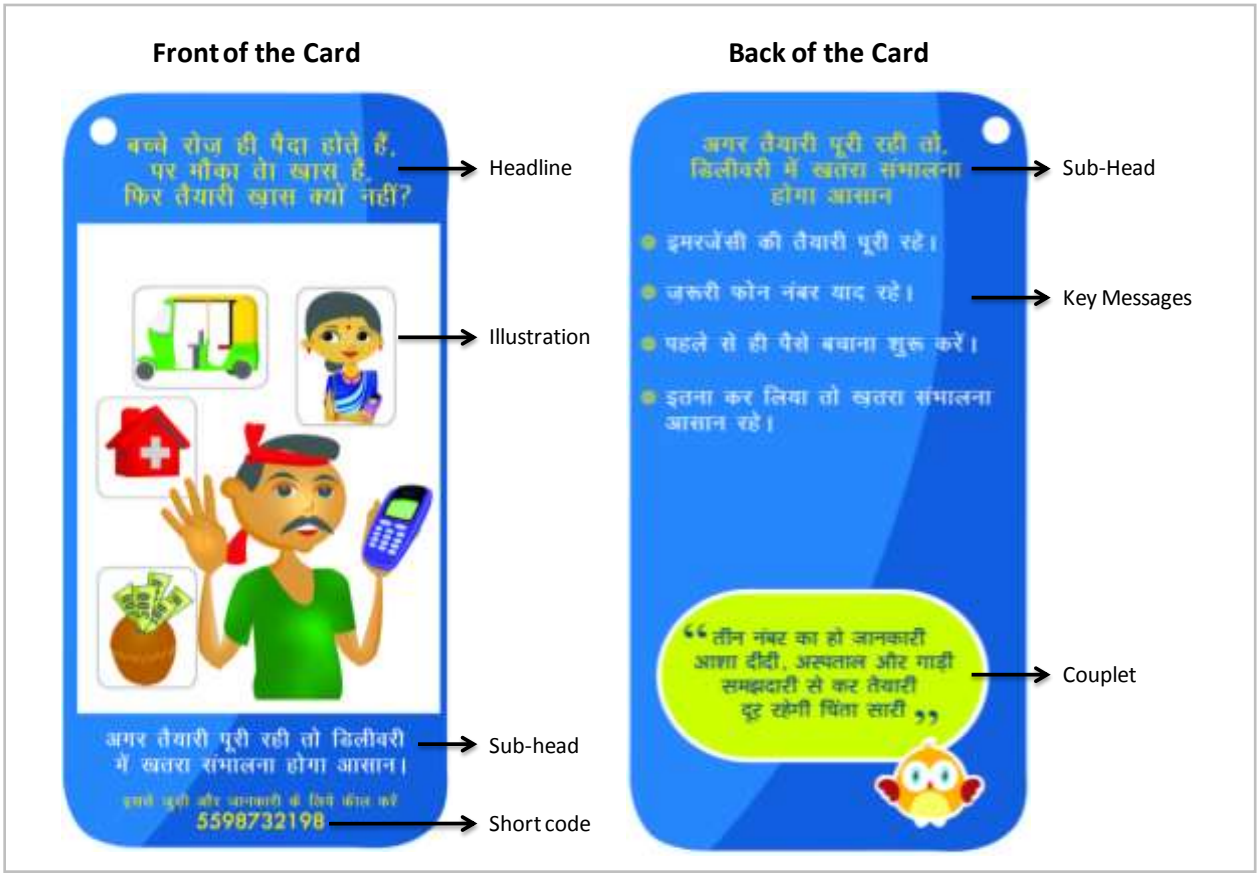
Source: Bill & Melinda Gates Foundation. "Ananya MIS 2013: Q4 (2012) & Q1, Q2 (2013) analysis." August 2013.
Note: N = 18505 for ASHAs. N = 20007 for AWWs.

2. Trainings to improve FLWs' communication skills

Frontline workers were enthusiastic about Mobile Kunji, and reported no difficulties understanding the directives they received on how to use the tool.

Mobile Kunji is the primary tool that Ananya offers to FLWs to help facilitate comprehensive, accurate, and persuasive dialogue with households regarding family health practices. SDP introduced Mobile Kunji to FLWs during the IPC trainings, explaining how the tool could help FLWs more easily achieve their objective of behavior change. When asked to discuss what they had learned during the IPC trainings, ASHAs and AWWs had no trouble recalling the instructions they had received on how to use the Mobile Kunji tool during home visits. All respondents report being trained on dialing in to the audio messages as well as the use of the cards. Some also recalled that the trainers showed them how to hold up the cards so that beneficiaries could see the illustrations clearly while they (the FLWs) read aloud the information on the back (see Figure III.2). All FLWs knew that calling in to Mobile Kunji short codes was free of charge. They reported that they received between 35 and 42 free minutes for this purpose (this amount likely varied by telecommunications provider).

Figure III.2. Sample Mobile Kunji card



Source: BBC Media Action. "Shaping Demands and Practices: Progress in 2011 and Plans for 2012." Presented at an Ananya Partners Meeting, Patna, India, February 2, 2012.

Despite a thorough introduction to the sales cycle approach during the IPC training, FLWs had difficulty recalling the information they received regarding the methodology.

The sales cycle approach offers a methodology for behavior change, the overarching focus of the IPC training. It explains exactly what steps the ASHA or AWW should be taking to "sell" a certain behavior or practice to the household. These steps are (1) establish a relationship; (2) identify a need; (3) formulate a solution; (4) get the family to commit to the solution; and (5) follow up and reinforce the solution. SDP makes a strong case to FLWs for using the methodology. It pitches the approach as an innovative solution to the difficulties FLWs typically experience in persuading households to adopt important practices. SDP calls the sales cycle approach *Bikri ki Jadugari* in Hindi, literally, "the magic of sales". Trainers explain the idea at length during the IPC session. They even detail how to use Mobile Kunji to execute each step. As part of step 1, the FLW should greet household members and exchange pleasantries to build a relationship with the family. As part of step 2, the FLW should read aloud the high-level message at the top of the back of the card to identify the need. As part of step 3, the FLW should relate to the household key messages that follow in bullet points to formulate a solution. To inspire trust and get the family to commit to that solution (step 4), the FLW should then dial in to the audio message and have the woman and/or other family members listen to the Dr. Anita character reiterate the FLWs' arguments. Finally, as step 5, before leaving the house, the FLW should read aloud the couplet at the bottom of the card to reinforce the solution.

"Topics such as how to use the cards and how to call Dr. Anita were easily understood by the FLWs, but how to implement the sales cycle approach, and how to use the Mobile Kunji as part of that, was difficult for them to understand."

Despite these efforts, FLWs display a limited recall of the details of the sales cycle approach. Some have only a vague recollection of the concept. Others mentioned that it entailed several steps but were not able to remember what those steps were. Some FLWs we interviewed noted that they were told to conduct their discussions with households the same way a salesman sold his products to customers. However, they had varied understandings of how they were supposed to replicate a salesman's line of strategy. One respondent said that just as a shopkeeper should know which product should be sold to which customer, FLWs should be familiar with the problems faced by their beneficiaries and advise them accordingly. Another said that she was supposed to be polite in her interactions with households, much like a salesperson when he talks to his customers. Only one respondent reported that she was told to explain messages to households in the same way a salesman convinces his customers to buy a product. Overall, a program staff member says, "topics such as how to use the cards and how to call Dr. Anita were easily understood by the FLWs, but how to implement the sales cycle approach, and how to use the Mobile Kunji as part of that, was difficult for them to understand."

Few FLWs recall receiving detailed guidance on how to use the job aid kit.

IFHI also offers FLWs another tool to facilitate communication with households—the job aid kit. This kit contains a variety of models and sample medicines, equipment, and supplies that ASHAs and AWWs can show to households to more easily explain the practices they are recommending.

Only 5 of our 15 ASHA and AWW respondents were able to recall with any detail what they had heard about the job aid kit. However, all five mentioned receiving information on two key sets of items in the kit. First, they noted that the meeting facilitators explained how to use the *katori* (cup) and spoon to explain the elements of complementary feeding, such as feeding children over 6 months half a *katori* of mashed foods and children over 9 months a full *katori*, or ensuring that children receive food up to the circle marked on the inside of the *katori*. Second, they also mentioned that the trainers explained how to use the Copper-T (or IUD) to begin a conversation about family planning.

3. Trainings to improve FLWs' capacity to plan and track home visits and other services

Only a limited number of FLWs recall the details of the home visit schedule recommended by CARE.

In additional to training on technical topics and effective communication, subcenter meetings also placed a strong emphasis on conducting home visits to households at critical points during pregnancy and early childhood. CARE recommends the following schedule for home visits:

- Pregnancy, 4–6 months: any contact (at home) sufficient–preferably two times
- Pregnancy, 7–9 months: at least two home visits
- Day of birth: presence at birth or home visit at the earliest point thereafter
- First week, 1–7 days: two home visits, many more if the baby is weak
- First month, 8–30 days: one to two home visits, many more if the baby is weak
- Infant, 1–5 months: any contact sufficient–preferably two to three home visits after 3 months
- Infant, 6–8 months: one home visit every month, or more if required
- Infant, 9–11 months: one to two home visits
- Child, 12–17 months: one to two home visits
- Child, 18–24 months: any contact sufficient–preferably, two to three times[26]

Most respondents were unable to provide this level of detail on the home visit schedule. They mainly cited more general guidance on which types of households to prioritize: pregnant women in their ninth month, all pregnant women, newborns, and emergency cases. Two respondents were unable to remember any of the information they received on how to plan home visits. Another two said they had not received any such guidance.

Only a few remembered the guidance they received on how to fill out the home visit planner.

As noted, CARE has developed a home visit planner that allows for the name-based tracking of each pregnant woman and child under two years of age to ensure that they receive visits and

[26] ICDS Project. "Register No. 8: Home Visits Planner–Register." Revised Register for Pilot Testing, August 2010.

services at the appropriate times. The planner is designed to help FLWs both schedule and track their home visits. Based on expected delivery dates and birth dates, and drawing on the above detailed time line for visits, FLWs are expected to build out a 33-month home visit schedule for each household, including the nine months of pregnancy and the first 24 months of the child's life. The planner also allows FLWs to track their interactions with each household over time. In the planner, FLWs are supposed to make a record of each of the visits they conduct. CARE has also developed a Work Analysis Tool, which is a spreadsheet used to summarize information in the planner on a monthly basis.[27] During the meetings, FLWs are expected to use this tool to discuss the needs of their catchment areas.

Although it appears several subcenter meetings emphasized the home visit planner, and almost all CARE block coordinators we interviewed noted that they reviewed the home visit planners and provided feedback on what to improve, FLWs were unable to remember in detail the guidance they received. Only 4 of the 22 FLWs we interviewed seemed to have grasped the concept—and importance—of building out a schedule based on the expected date of delivery or birth date, and only one mentioned that she was asked to fill out the work analysis sheets during the meetings.

There are a few possible reasons for this low level of comprehension, including poor literacy and the complexity of the planner. We discuss these issues further below in the next section, when we assess how home visit planners are used in the field.

ASHAs and AWWs report being told to coordinate home visits, but did not receive information on how to use the home visit planner for coordination.

As noted previously, there is typically one AWW and one or more ASHAs tied to each anganwadi center catchment area. One of Ananya's overarching goals is to ensure that these two functionaries, one from the ICDS and one from the health division, talk to each other more frequently, coordinate their work, and provide comprehensive coverage of family health services to households in their area. In terms of home visits, this target would mean that the ASHA and AWW would need to coordinate frequently to ensure that all target households receive home visits from one or the other of them at the appropriate times.

All of our ASHA and AWW respondents report a strong emphasis on coordination during sub-center meetings. Many said they were told to conduct home visits jointly. A few noted that they were told to divide the catchment area between themselves and each take responsibility for home visits to all target households in those segments.

There appears to have been limited instruction from IFHI on how to use the home visit planner for coordination—very few FLWs reported receiving guidance on this front. A couple of respondents said they were told to build schedules in their home visit planners together, and two

[27] In the Work Analysis Tool, FLWs are expected to record the number of registered pregnancies, women who have completed three months of pregnancy, women due for delivery in the current or next month, live births delivered at home, live births delivered at the hospital, maternal deaths, neonatal deaths, premature live births or babies less than 2 kilograms at birth, children who will be 6 months of age in the next month, and children of 9 months and 12 months of age.

others said they were asked to ensure that the entries in the ASHA's planner and AWW's planner were exactly the same.

In nonfocal districts, ASHAs and AWWs receive similar but less detailed family health information during block- and sector-level meetings; there is less emphasis on strict home visit schedules and effective communication strategies.

Out of all the ASHAs and AWWs we interviewed in nonfocal districts, only one noted that she was attending trainings at the subcenter; Pathfinder (as part of a different program) facilitated the meetings and provided instruction on pregnancy care, newborn care, infant feeding, and family planning. Most other respondents reported receiving information on MNCH topics during the monthly government meetings they were required to attend; the MOIC, BHM, and/or BCM hold a monthly ASHA *diwas* (day) at the PHC, and the CDPO holds monthly AWW meetings at the ICDS block offices.

The ASHAs and AWWs we interviewed in the two nonfocal districts report learning about issues and practices similar to what Ananya subcenter meetings cover but seem to have received less detailed information. Also, although ASHAs received information across domains—with a focus on antenatal care, immunization, and family planning—AWWs seem to have discussed during their monthly sector meetings mainly nutrition and the logistics of running their anganwadi centers.

There is some discussion of home visits. Almost all respondents mentioned that they were told to prioritize visits to pregnant women, newborns, and young children (either all of those under two years, or those in the 6-to-7-month age range). However, unlike Ananya, there seems to be little discussion of how to track home visits. These block- and sector-level meetings seem to place a strong emphasis instead on maintaining up-to-date immunization records.

Finally, only a handful of ASHAs and AWWs report receiving guidance on how to communicate health information to households, and most of this information seems more high level than the instruction offered by Ananya's IPC trainings. Nonfocal FLW respondents mention that they were told to "be polite" to household members and were encouraged to greet a senior member of the household or the mother-in-law first, get his or her permission to talk to the pregnant woman or new mother, and then approach the beneficiary.

4. Findings Related to the Sustainability and Scale-Up of Trainings

Implementation of two types of in-depth trainings (subcenter meetings and IPC trainings), to frontline workers from different government agencies across subcenters and blocks in eight different districts, is a significant exercise in management and coordination. Below, we address our findings related to meeting facilitation, content development, and logistical planning that are relevant to the sustainability of the IFHI and SDP interventions and how they might be scaled up to the rest of Bihar.

CARE and BBC are coordinating effectively to integrate their training content.

A cohesive program with intervention elements that complement and reinforce each other has a greater chance at sustainability. Since our November 2012 qualitative study to inform preliminary scale-up, SDP and IFHI have made significant strides in this area. Almost all the

ANMs we interviewed noted that the SDP block staff attended the IFHI subcenter meetings. They discussed the use of Mobile Kunji, Mobile Academy, and the sales cycle approach. IFHI staff also noted that they always kept a slot free for SDP in each month's subcenter module. One CARE block coordinator reported that the Pathfinder community coordinator, who is part of the SDP intervention, adapts his presentation based on the thematic focus of the subcenter meeting. For example, if the theme for the monthly meeting is family planning, the community coordinator he might demonstrate Mobile Kunji using the family planning cards and audio messages. SDP's MIS data show similar trends (see Figure III.3). Since early 2013, SDP community coordinators have participated in the majority of IFHI subcenter meetings.

In addition, there appears to be some coordination between BBC and CARE during weekly meetings held for ANMs (though to a lesser extent than at the subcenter meetings). A few ANMs reported that both IFHI and SDP block staff attended these sessions (called "ANM Tuesday Meetings"), with one briefing them on the topics for the next month's subcenter meeting, and the other on Mobile Kunji and other SDP program elements. There seems to have been less coordination with regard to the IPC trainings; with a few exceptions, CARE block coordinators did not attend the three-day sessions. Some SDP block staff did note, however, that CARE staff had received a briefing on IPC concepts at a district-level meeting.

ANMs are taking greater leadership at the subcenter meetings.

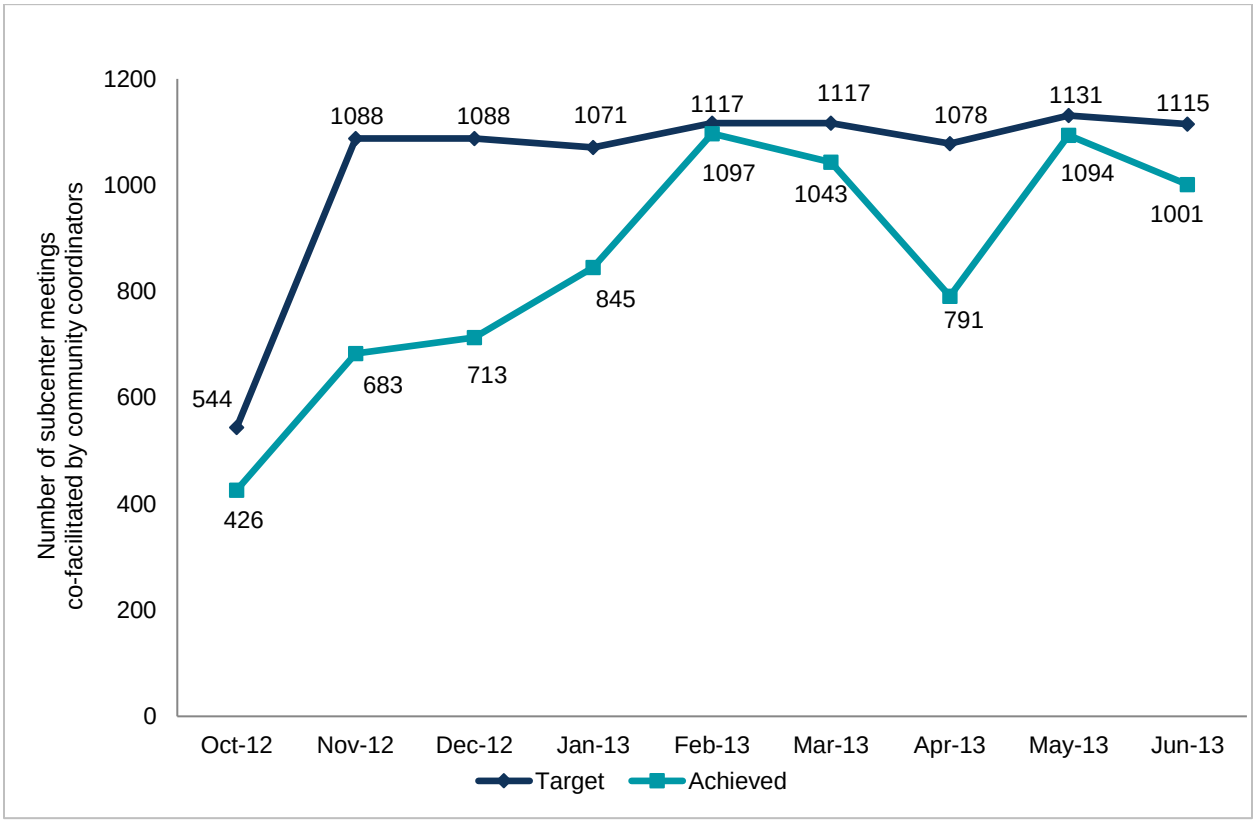
Ananya's vision in focal districts is that subcenter meeting facilitators will eventually transition their responsibilities to ANMs. This process has moved forward considerably since our dipstick field interviews in late 2011. At that point, very few ANMs were taking a leadership role during the subcenter meetings. Now, from all the FLW interviews we conducted for the process study, it seems that almost all ANMs are leading individual sessions of the subcenter meetings.

There is still progress to be made, however. We learned of only one ANM who was fully leading the subcenter meetings, the model to which IFHI wants to move. In addition, the general level of ownership by the ANMs is still low; ANMs still seem to view meeting facilitation as primarily the responsibility of CARE staff. They rely on them to present on the topics with which they are unfamiliar, interject during their own sessions when they make mistakes or have incomplete information, and exercise oversight over the ASHAs and AWWs. ANMs also have an imperfect understanding of how to fill out and use home visit planners and other registers, and so are not always able to effectively review ASHA and AWW registers and reinforce the importance of name-based tracking. In several cases, either the meeting facilitators or IFHI block staff take on that role during the meetings. One ANM said, "I am confident leading subcenter meetings on my own, but there should be someone to monitor my performance so that I can improve and so I won't say the wrong things. Also, I am not in a position to reprimand AWWs when they do not

"I am confident leading subcenter meetings on my own, but there should be someone to monitor my performance so that I can improve and so I won't say the wrong things. Also, I am not in a position to reprimand AWWs when they do not attend meetings. Only the external coordinator or someone from the outside can do that."

attend meetings. Only the external coordinator or someone from the outside can do that."

Figure III.3. Subcenter meetings at which SDP staff presented IPC content



Source: BBC Media Action. "Ananya MIS 2013: Q4 (2012) & Q1, Q2 (2013) analysis." August 2013.

ANMs may need a lengthier and more exhaustive training before they are ready to lead full subcenter meetings.

The program staff we interviewed are aware of gaps in ANM leadership; according to their reports, only a small fraction of ANMs have the confidence and ability to lead entire meetings. They have tried to address this challenge by offering ANMs more structured training during the government-led ANM Tuesday meetings that take place at the PHC each week. Instead of telling ANMs verbally about the next subcenter meeting's content (as they used to), they are now sharing printed versions of the meeting format, which lays out session by session the information that should be shared during the meeting. Not all ANMs seem to recall this information in detail, however. Some remember discussing only the rates of immunization and sterilization in their area, or being told about ongoing health initiatives and their responsibilities as related to those programs. The problem here may be that the training provided at the ANM Tuesday meetings is not rigorous enough. One CARE interviewee felt that ANMs should be offered an in-depth training, similar to the two- to three-day session held for meeting facilitators.

Some insights that program staff provided on ANM competencies may be helpful in informing training sessions for ANMs. They note that contractual ANMs are usually stronger than permanent ANMs, and that older ANMs struggle to understand and relay meeting content.

Most importantly, their sense is that several ANMs understand the technical topics but have limited pedagogical ability. That is, they have a limited aptitude for managing large groups, effectively running meetings, and transmitting information in a way that it is understood and retained.

ANMs' limited capacity to take on more work than what is already mandated by the government also affects their level of engagement with the subcenter platform and other Ananya initiatives.

The heavy immunization-related workload that ANMs face may lie at the root of their lack of ownership of the subcenter platform as well as their minimal engagement in supervisory duties (discussed further, below). For instance, ANMs are required to conduct in each of the five to six villages in their charge a monthly Village Health and Nutrition Day (VHND), which at present focuses mainly on immunization. ANMs are also frequently recruited for one-off immunization efforts, such as the Pulse Polio campaign. All of these responsibilities leave little to no time for other tasks. Many ANMs we interviewed emphasized that they were constantly on the road, either to villages or to the PHC, and were overburdened with work from all sides.

Given this high workload that ANMs face, the Ananya program will have to consider issues of capacity. Even the most trained or competent ANMs may be unable to take on the significant responsibilities that Ananya has in mind for them without reducing some of their immunization burden. The program has taken preliminary steps to address this gap. In a few communities, it has asked lady supervisors, who supervise the AWWs, to improve efficiency by sharing with ANMs the responsibility for leading subcenter meetings.[28] As the foundation and partners work to integrate Ananya into government programming across the state, it will be important to devise lasting solutions to the fundamental human resource issues underlying poor service delivery.

IPC trainings may benefit from additional emphasis on the Mobile Academy.

When asked what they would change if they could go back to the start of the intervention (in the context of scale-up), several BBC district staff recommended that the IPC trainings spend more time on Mobile Academy. Thoroughly explaining how to use the tool, how to operate the technology, and cost details would perhaps increase Mobile Academy uptake. Some district staff also felt that participants would benefit from training that lasts longer than three days (perhaps as many as four to five days).

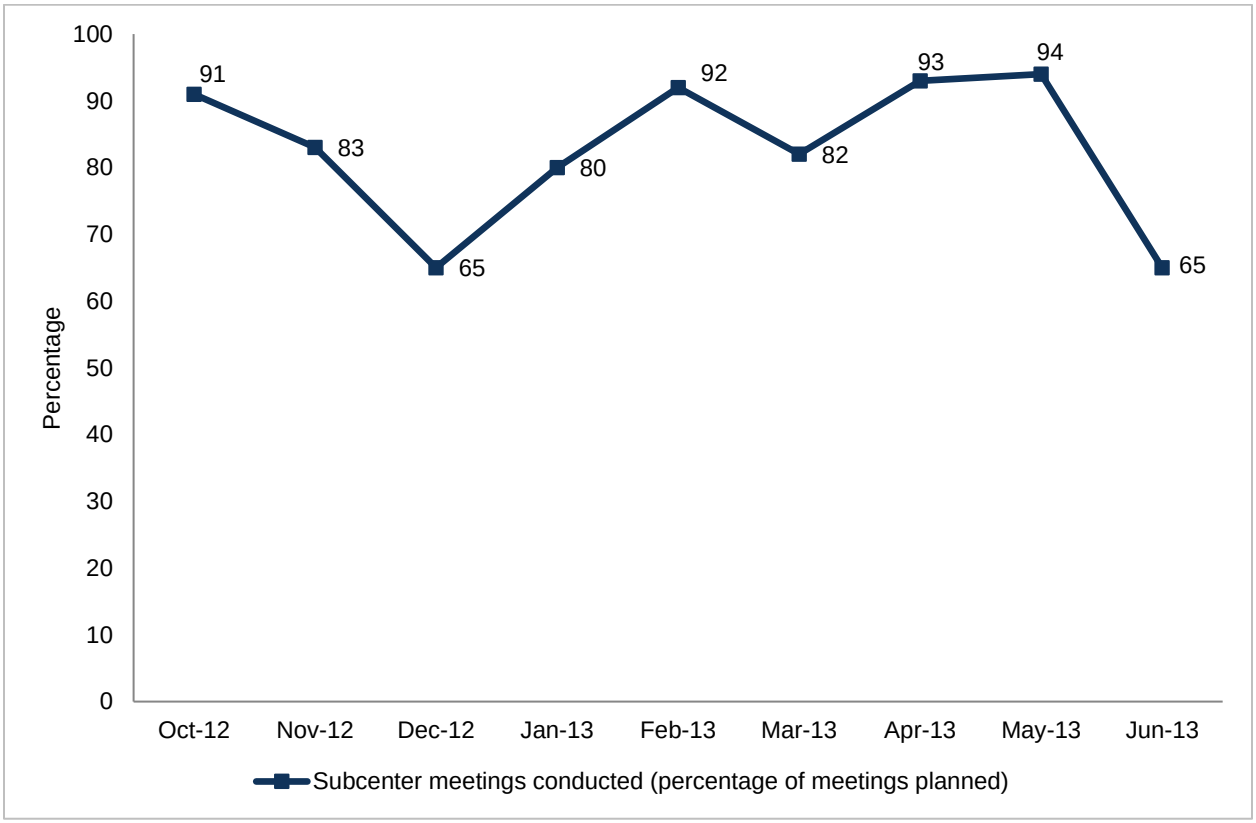
There were other suggestions from the SDP district and block staff on how to improve the IPC trainings. One respondent noted that it might be helpful to integrate more role playing into the training sessions, and another said he might work harder to inform FLWs about the benefits of IPC before the training as a way of motivating them to attend. Finally, one community coordinator said he would request government workers, such as the block community mobilizers and lady supervisors, attend more of the trainings—another way to increase FLW participation.

[28] This approach reduces some of the burden on ANMs and may also address concerns about ANM competencies. Although they do not have the technical background of ANMs, many lady supervisors are more educated than, and therefore may be more skilled at managing, ASHAs and AWWs.

Subcenter meetings are sometimes rescheduled or canceled because of scheduling conflicts with government activities and programming.

Once the microplanning for subcenter meetings is complete, CARE block coordinators continue liaising with government staff to ensure month by month that the scheduled dates still work for subcenter meetings. IFHI staff share the schedule with ANMs at the block-level ANM Tuesday meetings. ANMs in turn call ASHAs and AWWs to pass on the relevant dates. On occasion, lady supervisors, who directly supervise AWWs, are also recruited for this task, as are BCMs and ASHA supervisors.

Figure III.4. Frequency of subcenter meetings



Source: Bill & Melinda Gates Foundation. "Ananya MIS 2013: Q4 (2012) & Q1, Q2 (2013) analysis." August 2013.
Note: N = ~2500 subcenter meetings.

A problem that several implementing staff have cited, and those responsible for scale-up may also encounter, is that despite meticulous preplanning with block-level government staff, the roll-out of statewide initiatives has necessitated the cancellation of meetings that have been scheduled well in advance. Although the microplan is devised to avoid these conflicts, there may be additional unplanned activity. For instance, the CDPO may require AWWs to attend a new meeting, or a high-level government official (such as the chief minister) might visit the district, thus disrupting training schedules. MIS data collected by CARE corroborate this finding. Although in general 80 to 90 percent of scheduled meetings go forward as planned, this rate at times dips as low as 65 percent (see Figure III.4).

Poor accessibility of some subcenters and schedule conflicts might be leading to gaps in subcenter meeting attendance.

"I am old and it is tough to attend these subcenter meetings. The location for conducting these meetings is far and it is hard to arrange transportation for the return trip."

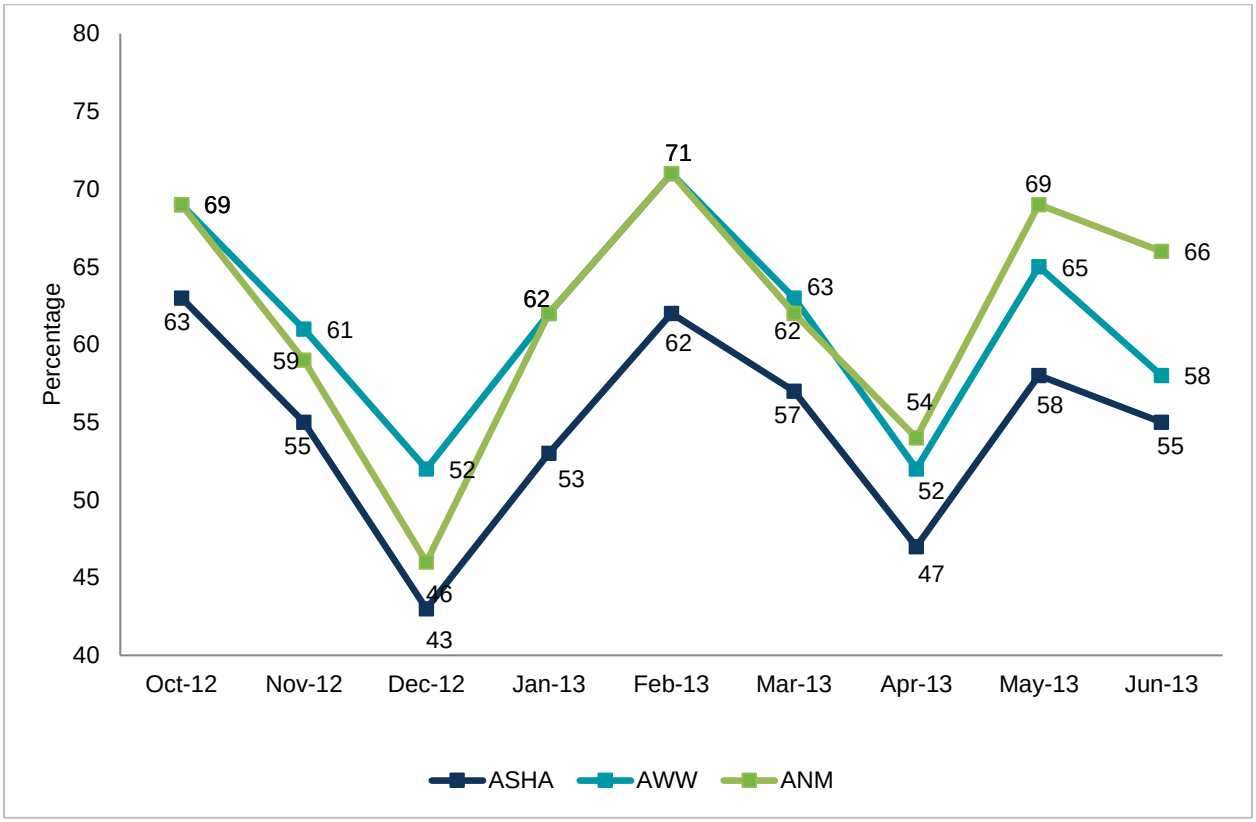
CARE block staff note that there are gaps in attendance; IFHI MIS data show that attendance can drop to around 50 percent in some months (see Figure III.5). They cite several reasons for FLW absenteeism. First—and frequently noted by the FLWs themselves—participants may face significant issues of access. Some do not have access to transportation and must walk an hour or more to reach the subcenter. Others live in flood-prone areas; therefore, traveling to the subcenter may be difficult, given that regular routes by road or field may be temporarily blocked. One ANM said, "I am old and it is tough to attend these subcenter meetings. The location for conducting these meetings is far and it is hard to arrange transportation for the return trip." A few CARE staff contend that some FLWs who belong to higher class or an influential family perhaps take the meetings less seriously than others and even skip them on occasion. One respondent said, "I am concerned about the participation and involvement of AWWs, many of whom come from families with influential connections. Getting these AWWs involved in the program is a very difficult task. They may come to the meetings but they don't think home visits are their responsibility and so won't conduct them." Finally, FLWs may miss meetings because of work-related responsibilities, such as accompanying women to facilities for delivery or government-mandated participation in one-off campaigns such as Pulse Polio.

It will be important to consider how to reduce absenteeism as the program scales up, given that, as one CARE district official noted, poor attendance can lead to gaps in the FLWs' knowledge of critical MNCH practices and thereby limit the long-term effectiveness of the subcenter platform. This respondent has taken strong measures to address this issue in his district. He carefully tracks meeting attendance and reports the names of absentees to the CDPO and MOIC, asking them to send a "warning note" to the parties at fault (a strategy that may or may not work in other districts).

C. Application of new skills and knowledge in planning and conducting home visits

Having discussed the extent of FLWs' recall of information received during trainings, we now provide our findings on how well they are putting that information to use. This section first explores the quality of the interactions between frontline workers and households, asking (1) How complete and accurate was the information provided? (2) To whom was the information provided? and (3) How effectively was it communicated? Second, the section analyzes how efficiently FLWs planned, scheduled, and tracked home visits and other services to beneficiaries. It assesses, at a high level, whether the frequency and timeliness of interactions with households have improved. As we describe these findings, we also discuss the monitoring of FLW home visit activities where relevant, and provide insights into any issues program staff faced while implementing monitoring efforts and whether and how they were using monitoring data to improve programming.

Figure III.5. Participation in subcenter meetings



Source: Bill & Melinda Gates Foundation. "Ananya MIS 2013: Q4 (2012) & Q1, Q2 (2013) analysis." August 2013.

1. Conducting informative and persuasive home visits

Households report learning from ASHAs and AWWs about several MNCH practices that are critical to follow; they report hearing more about pregnancy care than newborn care and complementary feeding.

We interviewed eight households with pregnant women, eight with newborns, and eight with 6-to-7-month-old children, and asked these respondents to discuss the information the ASHA and/or AWW shared with them during each stage of pregnancy and early childhood.[29] Of those who noted that they received relatively frequent visits from frontline workers (around half the households we interviewed), most reported receiving information on several key elements relevant to their stage of pregnancy or early childhood. For example, a pregnant woman might be informed about how to prepare for delivery (for example, saving money and identifying a care facility) and how to maintain a healthy diet. In general, FLWs seem to be passing on a fair amount of information related to immunization and practices to follow during pregnancy but less related to newborn care and complementary feeding.

[29] To minimize poor recall, we asked households with 6-to-7-month-old children only about their most recent experience with frontline workers–that is, any home visits made with regard to complementary feeding. We asked households with newborns about their interactions with FLWs both during and immediately after pregnancy, and households with pregnant women only about home visits conducted by FLWs during pregnancy.

FLWs are sharing information on important MNCH practices with mothers-in-law during home visits.

Given the Ananya program's focus (particularly in SDP interventions) on including husbands and mothers-in-law in conversations about family health, we also conducted focus groups with these key decision makers to determine the extent to which FLWs were interacting with them. Most mothers-in-law with whom we spoke noted that the ASHA or AWW in their area had indeed spoken with them about several family health topics. Most reported that they received information from the FLW on TT injections, diet during pregnancy, and the benefits of institutional delivery, as well as breastfeeding, complementary feeding, and family planning practices after birth.

Mothers-in-law have varied opinions on the usefulness of this information. A few said some of this information was new, especially related to logistical arrangements to make in advance of delivery and exclusive breastfeeding. However, others felt that they already knew what the FLWs were sharing with them and generally appeared to draw more on their own experience as well as the traditions of their community in deciding how to care for their daughter-in-law or new grandchild. One woman said, "We have given birth to six to seven children, and we know very well how to raise a baby. We don't need anyone's advice on how to raise a child."

Husbands have minimal interaction with frontline workers and feel that health care for their wives and children is not one of their responsibilities.

Our focus groups with husbands of pregnant women and fathers of children under 12 months revealed that there were few opportunities for young men to interact with frontline workers. A significant majority of men in rural Bihar are agricultural workers who leave home early to work in the field and return only in the evening. As a result, they are rarely present when the FLW visits the household during the day. Only two individuals reported that they had received information from ASHAs and AWWs firsthand.

"I am able to explain things much better now that I have Mobile Kunji. Earlier people never used to follow what I told them, but things have improved now. Though I do need to reinforce the message again and again, people are more receptive."

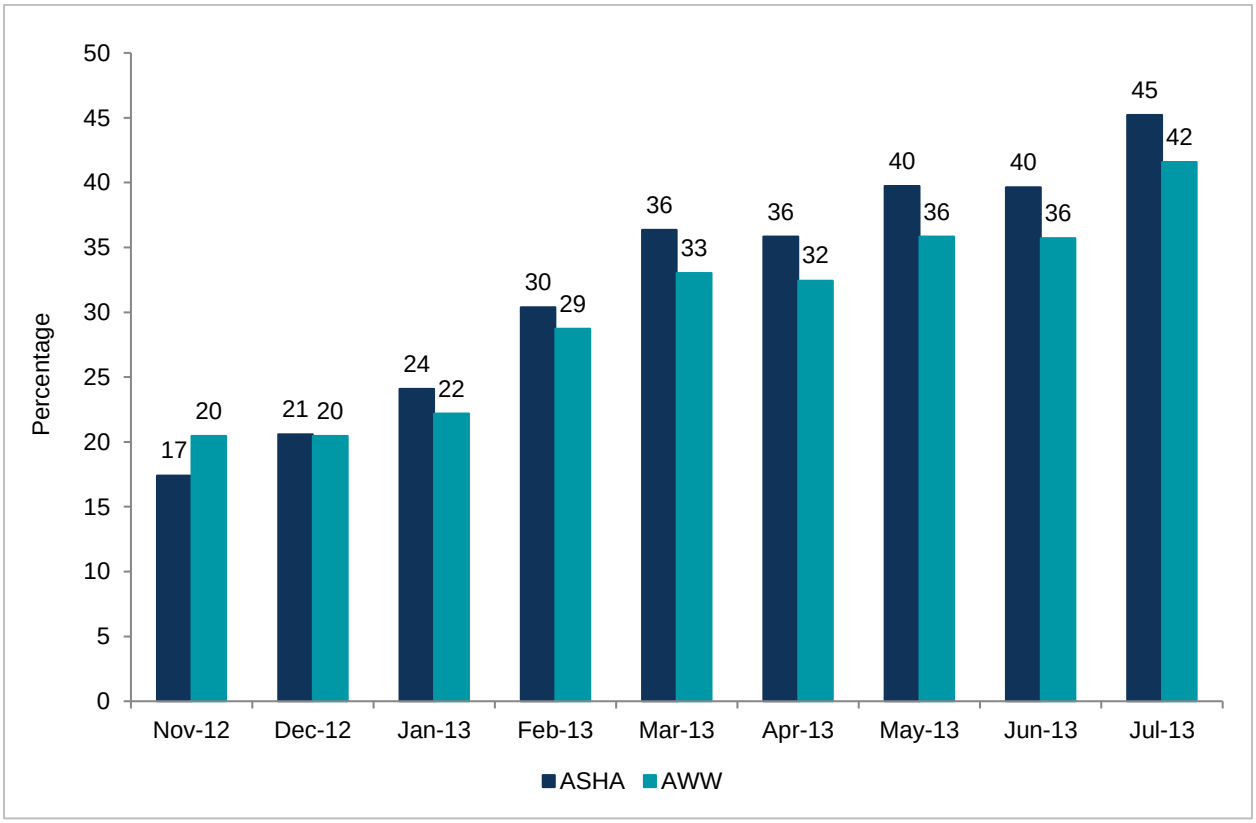
Importantly, when asked about their involvement before, during, and after delivery, many of the husbands in our focus groups were either confused or indignant. Their feeling was that these topics were relevant only to women and should be addressed to their wives and mothers. Their role, they noted, was to save money for the delivery and child, and potentially, to help with arranging transport to the facility for delivery. The men who participated in our focus groups did not consider even family planning their responsibility. For example, they felt that women, not men, should be the ones to undergo any sterilization procedure.

To encourage household implementation of important family health practices, it will be important to engage husbands more fully in health care for their wives and children. Because men are often not available during the day when home visits are typically conducted, the Ananya program may need to consider new ways of reaching them and involving them in family health issues.

Although FLWs report using Mobile Kunji frequently, household reports are lower. Households have a high level of recall of the information FLWs relayed using Mobile Kunji.

ASHAs and AWWs are excited about Mobile Kunji and feel that it has helped them communicate information to households more effectively. Most report that they are regularly using the tool during home visits. One FLW respondent said, "I am able to explain things much better now that I have Mobile Kunji. Earlier people never used to follow what I told them, but things have improved now. Though I do need to reinforce the message again and again, people are more receptive." Household reports of the use of Mobile Kunji were lower; fewer than half of our household sample said that an ASHA or AWW had used the tool when they visited. However, the electronic data that SDP collects to monitor Mobile Kunji use show that levels of access have been increasing steadily over time (see Figure III.6).

Figure III.6. Unique users of Mobile Kunji, by month



Source: Bill & Melinda Gates Foundation. "Ananya MIS 2013: Q4 (2012) & Q1, Q2 (2013) analysis." August 2013.
Note: N = 18505 for ASHAs. N = 20007 for AWWs.

We asked household respondents who reported seeing their FLW use Mobile Kunji, to tell us what they had learned. Our findings suggest that the tool may help households retain the key messages discussed by the FLW; there was a very high level of recall of the practices that the ASHA or AWW explained using Mobile Kunji.

Low levels of literacy amongst FLWs pose a barrier to Mobile Kunji use; some also cite network problems.

Pathfinder and BBC staff who have observed home visits describe several factors that influence Mobile Kunji use by ASHAs and AWWs. The most frequently cited issue, however, is illiteracy. Participants who have trouble reading and writing are generally less likely to use Mobile Kunji, with a few perhaps opting to use the audio over the cards.[30] And because ASHAs are on the whole less educated than AWWs, they have greater difficulties with the Mobile Kunji. That said, AWWs generally conduct fewer home visits (an outcome, as noted above, of their morning schedule at the anganwadi center, as well as their view that home visits are more the ASHAs' purview than theirs). As a result, although AWWs are more skilled at using Mobile Kunji, they are also less likely to use it frequently.

Several implementing partner staff also note that ASHAs and AWWs are perennially concerned about running out of minutes, and therefore postpone using Mobile Kunji extensively until the end of the month. To address this issue, Pathfinder community coordinators have developed and implemented at the subcenter meetings a "self-realization" activity, during which they ask frontline workers to calculate how many free minutes they have each week, in order to demonstrate that they can use the call-in feature of the Mobile Kunji on many visits and not run out of minutes.

Finally, a few respondents also reported network-related issues. In some cases, ASHAs and AWWs living close to the border with Uttar Pradesh have access to only roaming mobile phone coverage, in which case they get charged for the otherwise free Mobile Kunji minutes.

FLWs report using select items in their job aid kits frequently, but household reports are lower.

FLWs also have the option of using their job aid kit with models and samples to communicate information more effectively to households. Our respondents reported that they used a few items in the kit with particular frequency. During visits to households with children who should be receiving solid or semisolid foods, they use the *katori* (cup) and spoon to explain how much food the child should be fed. Several respondents also said they were using the wall stickers (small forms or checklists that can be stuck on the wall) to indicate which services they provided to households during each visit.

As might be expected, there is some reporting of desirable responses among FLWs, and reports from households of the use of the job aid kit were lower. Only 5 of the 24 household respondents said they saw items from the job aid kit being used. Four reported that their FLW put up a wall sticker in their house to indicate what services had been provided during the home visit, and one noted that the FLW had showed her a *katori* and spoon.

[30] SDP took low literacy into account while designing Mobile Kunji. The cards are color coded, such that illiterate FLWs can identify themes by color and accordingly select the most relevant card for each home visit. None of our respondents cited this feature when we spoke with them. As noted, if illiterate, they either forgo using the tool at all or rely primarily on the audio messages.

Most ASHAs and AWWs are implementing step 1 (establish a relationship) and step 3 (formulate a solution) of the sales cycle approach, but very few understand and execute the remaining steps.

The program's vision is that ASHAs and AWWs would ground their explanation of technical family health information and their use of the Mobile Kunji and other tools (such as the job aid kit) in the sales cycle approach. By asking our FLW respondents to describe their most recent visit, we tried to discern how effectively and comprehensively they were implementing these steps. By and large, we found—as we did when we asked FLWs to describe what they learned during the IPC training—that their understanding and recall of the purpose and various components of the sales cycle approach has notable gaps. Nevertheless, they are putting into practice at least two of the five steps of the methodology, namely step 1 (establish a relationship) and step 3 (formulate a solution).

Most respondents noted that they made sure to greet family member politely when they entered the house, and to talk first to the mother-in-law before asking to speak with the pregnant woman or mother of the newborn or young child. Not as many were adept at implementing step 2—identifying the need. Very few report asking the beneficiary whether she had any problems, questions, or concerns and targeting their messages accordingly. Instead, they implemented step 3—formulate a solution—mainly on the basis of the type of beneficiary they were visiting. For example, to a woman in her eighth month of pregnancy, the ASHA provided information about delivery preparations, including saving money and arranging for transportation to the facility. Very few of our respondents seem to have implemented steps 4 and 5 (getting the family to commit to a solution and following up and reinforcing the solution).

SDP staff use home visit monitoring to track how well FLWs are putting IPC concepts into practice, and to motivate FLWs and offer them a source of support.

SDP staff are making active use of the monitoring data they collect via their home visit observation checklists. District and block staff sit together fortnightly to discuss the results of their observations—areas where ASHAs and AWWs are doing well and where they need more assistance. At every other meeting, they present a write-up of their findings from home visit observations.

In addition to checking in with each other about what FLWs most need help with, SDP staff also provide direct feedback to the FLWs after the home visit observations. The guidance they provide covers all aspects of the checklist. Program staff make note of which steps of the sales cycle approach FLWs could be implementing more effectively, whether they are using Mobile Kunji at all, and if so, whether they are doing it correctly (for example, whether the cards are held up so households can see the pictures and messages, and whether FLWs are introducing Dr. Anita before playing the audio messages).

All BBC and Pathfinder staff we interviewed noted that they are careful to provide constructive feedback to frontline workers. They always begin with positive feedback and voice their appreciation for the work that the FLW is doing and then gradually move on to areas that could be improved. Respondents say they emphasize repeatedly that they are sitting in on home visits not to monitor or test FLWs but to provide support and help. As a result, they note that

although FLWs were somewhat apprehensive at the start about having program staff observe the home visits, they are now relaxed and appreciative of the guidance they receive.

SDP does emphasize a few barriers it faces in conducting the home visit observations, as well as limitations on the use of the collected data. Although program staff may be choosing FLWs either randomly or using preselected criteria, the FLW in turn can pick any household in her catchment area to visit. As a result, ASHAs and AWWs sometimes choose to hold the observation sessions in households with whom they have a good relationship, a trend that introduces bias into the monitoring data. The home visit observations conducted by BBC and Pathfinder cannot cover all types of interactions. The male district and block program staff are restricted from observing visits related to what are perceived as sensitive or private issues, such as family planning or breastfeeding. At a higher level, a key limitation might be that SDP can cover in its home visit observations only some subset of FLWs. It is also possible that practices—such as the use of Mobile Kunji and the implementation of all the steps of the sales cycle approach—will improve only after repeat observations and provision of multiple rounds of feedback.

BBC draws on the call log data it collects as part of its monitoring systems to track Mobile Kunji usage and motivate ASHAs and AWWs to use the tool more frequently.

As noted, SDP looks to its call log data to get a sense of how frequently FLWs are using Mobile Kunji. It tracks, for example, the unique users dialing into the tool, how long each call lasts, and which short codes are used the most and least frequently. SDP actively uses these data to urge more frequent use of the tool. During subcenter meetings (which offer SDP a slot to discuss IPC-related topics), they draw attention to ASHAs and AWWs who have had particular success integrating Mobile Kunji into their home visits in the past month, and motivate more to do the same.

In nonfocal districts, frontline workers are providing similar MNCH information to households but in less detail; they are not using any technology-assisted materials during home visits.

In our interviews with households in nonfocal districts, we sought to learn about both the frequency with which home visits were conducted as well as the content they covered. As discussed earlier, around half of our FLW respondents appeared to be conducting home visits with some regularity. Of those, most provided the same information as FLWs in focal districts but offered fewer details and less specific guidance. The focus of the advice provided by FLWs was also slightly different. In focal districts, ASHAs and AWWs appeared to be informing households about practices in each of the key family health domains. In nonfocal districts, most of the households who reported that FLWs did conduct home visits and provide counseling seem to have heard only a handful of select messages—on diet during pregnancy, TT injections, the benefits of institutional delivery, and family planning operations (some of which are practices that the FLW receives incentives for motivating).

From our focus groups with mothers-in-law and husbands in the nonfocal districts, we tried to ascertain the extent to which frontline workers were also speaking with these key household members during home visits. Mother-in-law respondents in Gaya and Araria report hearing mainly pregnancy-related messages–that is, they received advice on what their pregnant

daughters-in-law should be eating and were also given the phone number for an ambulance. Husbands, as we saw in focal districts, had little to no interaction with frontline workers, given that they were away in the field when ASHAs and AWWs typically conducted home visits.

There was also minimal use of technology-assisted materials or tools in nonfocal districts. Around half of our FLW respondents reported receiving posters or booklets about various elements of family health and showing the pictures in those materials to families during home visits. However, only 3 of the 24 households we interviewed in nonfocal districts recalled the use of job aids during FLW home visits.

2. Planning and tracking home visits and other services

In addition to ensuring the high quality of each home visit, the Ananya program also hopes to increase the regularity with which these high-quality home visits are made. Above, we summarized the training and tools offered to FLWs on how to effectively plan and implement a home visit schedule. Below, we assess the extent to which ASHAs and AWWs are implementing the guidance they received.

FLWs are conducting home visits more frequently than they have in the past.

We interviewed 24 households and conducted eight focus-group discussions with mothers-in-law and eight focus groups with husbands about their interactions with frontline workers in the eight focal districts. Specifically, we asked them how frequently the FLWs visited during pregnancy, when their children (or grandchildren) were newborns, and when their children (or grandchildren) were 6 to 7 months old. Around half of the respondents indicate that the FLW visits more frequently than she did previously and also explains information more clearly (perhaps by providing additional detail). However, there is inconsistency in how carefully FLWs seem to be following the home visit schedule recommended by the Ananya program.

Though the trend is not uniform across the eight sample communities, it appears in general that ASHAs are conducting more of the visits than AWWs. This development might be linked to the fact that AWWs are usually occupied at the anganwadi center until the early afternoon with distributing rations and conducting preschool activities, which reduces the time they have available for home visits. Several implementing partner staff also noted that AWWs feel that conducting home visits is more the ASHA's responsibility than theirs.

There is some inconsistency in how carefully FLWs are following the recommended schedule for home visits.

Although FLWs are making more home visits, they may not always do so at the correct times (at critical points during pregnancy and early childhood, when guidance from an FLW is most necessary). From our interviews with households, it seems like FLWs only loosely follow the detailed schedule that IFHI provides for home visits from the first trimester through the first two years of a child's life.

FLWs seem to have been diligent about conducting visits during pregnancy. Several household respondents noted that an FLW visited several times when they were pregnant. Those that received only one visit, however, indicate that it took place several months prior to delivery (not in the final month, when it is most vital to pass on information related to birth preparation

and newborn care). In the case of newborns, again, FLWs sometimes visit the household 10–15 days after the delivery. There also seem to be fewer visits conducted to households with 6-to-7-month-old children to explain complementary feeding practices. FLWs' lack of adherence to a schedule may be linked to their scant use of the home visit planner. It is also possible that AWWs are prioritizing the instructions received from ICDS to conduct three home visits a day, regardless of the type of household.

Not many FLWs are using their home visit planner or other written records to determine when to visit households.

Figure III.7. Home visit planner

The lack of timeliness in home visits may be linked to the fact that FLWs generally do not do much planning with regard to their visit schedule. With the exception of two respondents, none of the ASHAs and AWWs we interviewed has a sound grasp of how to use the home visit planner to keep track of when it is important to visit households with pregnant women and young children in their area (see Figure III.7). Some track respondents using other records, either the due list (which contains the birth dates of beneficiaries), or an informal notebook or diary. However, few seem to draw on any written records to decide when to visit which household.

Given the general absence of a visit schedule, we also analyzed the information we received on how FLWs were prioritizing home visits. That is, we sought to understand whether FLWs thought critically about whom to visit and why. Although some respondents said they prioritized visits to certain types of households (those with pregnant women, newborns, and emergency cases, including sick mothers and weak newborns), several still had no real system for determining who to visit. Some FLWs said they visited the households that lived closest to them. One AWW said she conducted visits to three households a day in the order in which they are listed in her survey register (that is, households 1, 2, and 3 on one day, households 4, 5, and 6 on the next day, and so on). This respondent may have been following guidance from ICDS, which has instructed AWWs to conduct three home visits a day.

The infrequent use of the home visit planner is tied to low levels of literacy, the complexity of the planner, and a high burden of recordkeeping duties.

There are a few potential explanations for the scant use of the home visit planner. The first is the low level of literacy among FLWs, with ASHAs (who typically have an 8th-grade education) experiencing particular difficulties in filling out the home visit planner. The ASHAs in our sample cite a variety of strategies to tackle this problem. Some enlist the AWW's help, seeking

her guidance on where to fill in what information. Others list their visit dates in a notebook and ask the AWW to record the dates where they belong in the planner. A few ASHAs even said that they copied the details in their home visit planner directly from the AWW's planner. It was unclear in these cases whether the ASHA was inputting information on AWW home visits into her planner, or whether the AWW was tracking both of their visits and all FLW visit information was being transferred into to the ASHA's planner.

The effects of poor literacy on the use of the home visit planner are compounded by the complexity of the register and accompanying instructions. IFHI offers very detailed protocols for how information should be transferred from the survey register into the home visit planner and how the home visit planner should be updated. Once enumeration is complete, the goal is to have the information on pregnancies and births transferred to the home visit planner, whereby these beneficiaries can be carefully tracked over time. Using a "transfer sheet" provided by IFHI, FLWs are expected to gather the information on all pregnant women and children under two from the household lists in the survey register and input it into the home visit planner starting with women who have two-year-old children and ending with women who are in their first trimester.

Once the initial information is complete, there is a protocol for how to update the home visit planner with new pregnancies and births. The process begins when a woman registers her pregnancy. The FLW should first calculate the woman's expected delivery date (EDD) using a process recommended by IFHI, and enter it into the planner along with the woman's name. Then, on the basis of the EDD and the recommended visit schedule, she should calculate the dates of the planned visits and input them into the designated row in the home visit planner. Under each forecasted visit date, the planner offers some space for additional information. In these boxes, FLWs should enter the date on which the visit actually happened and if needed also include any details of the visit that she thinks are important to remember or record. Once the child is born, his or her birth date should also be entered into the planner. Then, once again, based on the recommended visit schedule, the ASHA or AWW should input into the planner the dates on which she plans to visit the household, as well as the dates of the actual visits. This process is complicated and time-consuming for all FLWs. Those who have limited reading and writing abilities find the complexity of the planner particularly overwhelming and are disinclined to use it.

"Sometimes it becomes difficult to carry a lot of registers and tools with me, so I need to leave them at home."

Home visit planner use may also be limited because FLWs have so many other registers to fill out. AWWs, in particular, report that they have as many as 15 to 20 registers to maintain and update. The approach of many AWWs to this surfeit of records is to pick the low-hanging fruit. They choose a few registers based on the current focus of whichever meetings they are attending and update only those records. One AWW said, "Sometimes it becomes difficult to carry a lot of registers and tools with me, so I need to leave them at home. A laptop would be helpful. I would like to see all the registers at the same time in one place."

Coordination of home visits between ASHAs and AWWs is inconsistent.

As noted, one of Ananya's key goals is to more closely integrate the family health services provided by ICDS (which employs AWWs) and NRHM (to which ASHAs belong). However,

despite the extent to which subcenter meetings emphasize that these two functionaries should coordinate with each other while conducting home visits, to ensure that households are provided key services and information at the most appropriate times, ASHAs and AWWs do not seem to be sharing home visit responsibilities. Most of their coordination is related to immunization, which is an incentivized activity.

Half of the FLWs we interviewed do not appear to be conducting any sort of home visit coordination with the other FLW in their catchment area. The other half undertake varying levels of joint action. Some say they conduct home visits separately but share with each other the details they learned during those visits. Others conduct home visits jointly. And a few alternate between the two—sometimes doing the visits together and sometimes on their own.

Very few FLWs seem to be using the home visit planner in their coordination. There were a few cases of the AWW developing the schedule using the planner and then assigning the ASHA a portion of those visits. In general, however, it is unclear whether FLWs understand whether the home visit planner should track only the home visits that they themselves conducted, or home visits to the entire catchment area (including those that the other FLW conducts).

FLWs regularly use due lists to track immunizations.

In addition to conducting regular home visits to their beneficiaries, FLWs provide immunization services to all pregnant women and young children in their area. These services can take many forms. ASHAs and AWWs gather children for the monthly village health and nutrition days (VHNDs), during which ANMs come to the anganwadi centers to administer immunizations. There are also national drives, such as the Pulse Polio campaign, that involve FLWs going door to door to provide vaccinations.

IFHI plans to integrate into its subcenter meeting curriculum some guidance on how to accurately track immunizations using a due list, so our interviews included a few questions on how FLWs planned and organized their immunization work. Overall, it seems like FLWs are diligent about keeping track of which children are due for which immunization each month—they are already creating due lists, whether formally in a register or informally in a notebook or diary, and using them to identify those due for immunization each month. This level of attention to immunization services is likely related to the fact that FLWs receive monetary incentives for motivating families to vaccinate their children. In general, VHNDs, the Pulse Polio campaign, and other immunization initiatives are long-standing and institutionalized elements of family health care in Bihar and have closely integrated immunization services into FLW duties.

FLWs rarely track ANC services for pregnant women.

FLWs are also expected to track three types of pregnancy-related services in their catchment area: (1) the receipt of a full IFA tablet prescription, (2) two TT injections, and (3) three ANC checkups. To achieve this goal, they should be using a pregnancy register, which has columns for recording the woman's month of pregnancy, expected date of delivery, and whether she has received the above three services.

IFHI also intends to improve tracking of ANC service. As part of the subcenter meeting curriculum, it aims to provide instruction to FLWs on how to more effectively use the pregnancy

register. In the field, we found by and large that FLWs do not have pregnancy registers, and do not track these services in any other format. The few respondents that reported doing so mainly tracked only TT injections, usually as part of the immunization due list.

ANMs remain focused on immunization activities and have not fully embraced a broader supervisory role toward ASHAs and AWWs in the field.

Ananya's vision is that ANMs will provide more general supervision to ASHAs and AWWs in the field, by conducting home visits with them, reviewing their registers, and providing guidance to them on areas of focus. However, as noted previously, ANMs have time-consuming immunization duties they have to complete in the field. They administer the immunizations during VHNDs at each of the anganwadi centers in their area and coordinate with ASHAs and AWWs to ensure that the children in their area receive the necessary vaccinations. They also review the due lists maintained by ASHAs and AWWs and input that information into their Maternal and Child Health (MCH) registers to assist with determining their eligibility for immunization incentives.

Their involvement in other activities is minimal. Most of the register review in the field is limited to the due lists maintained by ASHAs and AWWs, with only one or two ANMs reviewing home visit planners when they were in the villages in their catchment area. Their involvement in home visits is also unclear. The ANMs in our sample report that although VHNDs are focused mainly on immunization, they do conduct home visits after the VHNDs are complete, on nonimmunization days, or when the ASHA or AWW requests they assist with specific cases. However, these responses are, most likely, desirable. None of our households mentioned that an ANM had visited them, and several CARE block coordinators stated explicitly that ANMs did not conduct home visits.

ANMs are also expected to collect information on a set of key indicators in each of the villages in their catchment area and use that information to both guide their own activities and inform the advice they provide to ASHAs and AWWs. To gather this data, CARE has given them the ANM Management Tool, a collection of spreadsheets in which the ANM tracks the following information for each of the anganwadi centers in her area: status of registers, number of different types of home visits conducted, pregnancy registration, stillbirths, intention to use family planning methods, danger signs during pregnancy, delivery and the postpartum period, care of small or weak newborns, and breastfeeding and complementary feeding. Only one ANM in our sample reported using the tool as outlined above. Most had never heard of the tool, and two noted that they had received it, but not filled it out.

IFHI staff use monitoring data to rank subcenters and share this data with high-level government officials to influence performance.

IFHI district staff use monitoring data to get a sense of which subcenters in their district are especially successful or problematic. In a master list, they designate each subcenter as green or red based on several factors, such as meeting attendance and number of home visits. They then share that list with both ICDS and health officials at the district level and stress that their (the government's and IFHI's) joint goal should be to convert all the reds to greens. This message then filters down. For instance, the civil surgeon might speak with ANMs about attendance being low at their subcenter meetings. Implementing partner staff note overall that for the community-

level initiatives to be effectively scaled up, it is vital that the government continue to carefully track the work that frontline workers do and take meaningful action to advance their knowledge, abilities, and commitment. They feel that direct supervision and oversight generates the best results.

LQAS data are used mainly to understand in real time what is and is not working well in the field and accordingly offer targeted guidance to FLWs; they are used less frequently for data-driven management by government officials.

As noted, IFHI collects monitoring data from households on key MNCH practices they are following. It aims to get a sense—at the block level—of both behaviors that are improving and areas where the FLWs might need to do some additional work, and then use that information to work with government officials to facilitate data-driven management. Our interviews suggest that IFHI uses these data effectively to understand what to emphasize further in its own interventions. Specifically, IFHI headquarter staff produce a summary report for each block that the block coordinator can draw on to understand what needs to be improved in his or her area and highlight those issues for FLWs during subcenter meetings.

LQAS information seems to be less successfully used for data-driven management focused on presenting monitoring information to local government, highlighting areas for improvement, and motivating officials to undertake policy action or sponsor new programming. Although summary reports are shared with block officials, several medical officers-in-charge and block health managers we interviewed were either entirely unfamiliar with the data collection or only vaguely aware of it. Those respondents who did report discussing LQAS data with CARE staff do not seem to be using the data in a systematic way to shape programming decisions. Only one MOIC indicated that he had applied in his work what he had learned from the data (he emphasized the importance of conducting regular home visits during the monthly meeting held for ASHAs at the block PHC).

In nonfocal districts, ASHAs and AWWs do not use home visit planners and generally do not conduct regular home visits; they do, however, plan and track immunization services carefully.

As we did in focal districts, we also spoke with FLWs in nonfocal districts about their planning for home visits. With the exception of one respondent who referenced her pregnancy and newborn register, none of the ASHAs and AWWs we interviewed used written records to plan their home visits. Our respondents did seem to be prioritizing certain types of families for home visits—primarily those with pregnant women and newborns. Six out of the 16 we interviewed even noted that they followed a specific schedule—for example, they visited newborns the 1st, 3rd, 7th, 14th, and 21st day.

By contrast, household reports indicate a lower frequency of visits. Only around half reported receiving visits during pregnancy and when their children were newborns (with newborn visits typically conducted well after the first week). Even fewer received visits when their children were 6 to 7 months old.

As in the focal districts, the planning for immunization is more organized than for other services. Many women note that FLWs come by to remind them to get themselves or their

children immunized at the VHND, or to give their children pulse polio drops. ASHAs and AWWs themselves report making the most frequent use of their due list or immunization register, in which they list all the individuals who should be receiving vaccinations on the day of the VHND, record who eventually receives vaccinations, and then carry over those who missed their shots to the following month's list.

D. Exposure to mass media and community mobilization

Very few households had heard the radio program or seen the two TV advertisements.

Ananya also looks to mass media to expand the reach of important family health messages. With its Bihar-wide radio program *Khirki Mehendiwali* and TV ads on family planning and birth preparation, it seeks to influence—and change—household behavior. The main barrier these mass media interventions face is the extraordinarily low rate of radio and TV penetration in rural Bihar. Indeed, almost all household respondents we interviewed said they did not own a radio or television set and that they had very limited access to electricity. Accordingly, out of all focal and nonfocal district respondents, only one person had seen the *Ek Teen Do* birth-spacing advertisement (when he was traveling outside the village), and only one person had heard a *Khirki Mehendiwali* episode. None of our respondents had seen the *Chaar Gaanth* birth-preparation advertisement.

SDP is cognizant of these challenges. All of the community coordinators and district staff we interviewed reported very low radio and television coverage in their areas. Nevertheless, they have tried to gain an understanding of how the community has received its mass media messages by interviewing six households each month for a period of three to four months. However, this effort does not seem to have been uniformly executed across all blocks and districts, and there is also some discrepancy in the community coordinator reports about whether it is focused only on *Khirki Mehendiwali* or also on the two TV advertisements.

Although none of our respondents had attended the mobile van screenings of the television advertisement on birth preparation, implementing partner staff report large audiences and many female participants.

One step SDP has taken to address the low reach of its mass media programming is to disseminate it via rural activation. Its mobile van campaign screened the *Chaar Gaanth* birth preparation TV advertisement in remote areas with limited access to television (Figure III.8). Almost none of the respondents we interviewed as part of the process study had participated in these screenings. However, the BBC and Pathfinder staff we interviewed note that when these screenings took place, the audiences that gathered to watch the video ranged from 75 to 200 people. They report high levels of participation of women (of all ages), and that reactions to the video and accompanying street play, in their view, were generally positive.

E. Conclusion

FLWs appreciated both types of training provided (the IPC training and training provided at the monthly subcenter meetings), retaining much of the technical content they received on family health practices and the guidance they were given on the use of Mobile Kunji. ANMs have vastly improved their facilitation of subcenter meetings and are leading individual sessions, but may need more training before they can lead entire subcenter meetings. In the field, ASHAs and

AWWs are relaying a significant proportion of what they had learned during trainings, especially with regard to pregnancy care. They are including mothers-in-law in the conversation, but have difficulty accessing husbands of target women, given that these men are typically not in the communities during the day.

Some FLWs, however, are having more trouble with integrating IPC tools and concepts into their home visits. They have not fully understood the sales cycle approach, and are generally implementing only steps 1 and 3, and although they are enthusiastic about Mobile Kunji, low literacy or other factors may hinder some from using the tool during home visits. When we analyzed FLW efforts to plan home visits, we found that most FLWs had increased the frequency with which they were interacting with households. However, they are not using their planners to systematically plan their visits and thus may not be conducting them at the most critical times.

Figure III.8. A mobile van screening of the Chaar Gaanth advertisement

Source: BBC Media Action. "Impact Evaluation of 'Chaar Gaanth' Communication Campaign on Birth Preparedness in Bihar." Available at [http://www.rethink1000days.org/wp-content/uploads/2013/08/BBC-Media-Action-Impact-Evaluation-of-%E2%80%9CChaar-Gaanth%E2%80%9D-Communication-Campaign.pdf]. Accessed January 29, 2014.

"The way I work now is very different from how I worked a year ago. Initially, it was tough to gather all the women and talk to them. Now women are coming out of their houses and participating actively. But now I am also a lot busier and have a lot more responsibilities. I have to attend more meetings, fill out more registers, and do more home visits, so I am not able to devote my time to teaching children, which is my main job."

As Ananya scales up, it will be important to learn from its work in the eight focal districts to identify—and tackle—critical barriers to sustainability. In each of the above sections, we identified certain programmatic features and contextual factors that may pose challenges going forward. The main programmatic barrier we highlight is the complexity of the home visit planner, a key tool in increasing the frequency and timeliness of home visits. The contextual factors are several, and include issues related to the government, to infrastructure, and to the capacity of frontline workers. For instance, we found that government initiatives often interfered with training schedules, leading to the frequent cancelation of meetings. Coupled with the difficulties related to subcenter accessibility, the

frequency and last-minute nature of these initiatives also resulted in lower attendance at trainings. Poor literacy is also a major concern and affects the use of mobile phone-based tools—both Mobile Kunji and Mobile Academy—and also of the home visit planner. Finally, Ananya will have to devise creative strategies to expand the traditional focus of FLWs to include Ananya duties. For instance, AWWs are absorbed in their work at the anganwadi center and overwhelmed with record-keeping duties, and ANMs remain focused on their immunization responsibilities and reluctant to take on additional work in the field. As one AWW said, "The way I work now is very different from how I worked a year ago. Initially, it was tough to gather all the women and talk to them. Now women are coming out their houses and participating actively. But now I am also a lot busier and have a lot more responsibilities. I have to attend more meetings, fill out more registers, and do more home visits, so I am not able to devote my time to teaching children, which is my main job."

Finally, several of our interviews suggest that going forward, for the community-level initiatives to be sustainable, the government will have to maintain the level of supervision and oversight that Ananya has put into effect. As one implementer said, "Government officials have to feel a sense of ownership; only then will the interventions be successful in the scale-up districts. For example, for the subcenter platform, someone should be there from the government side to check if the ASHAs and AWWs are attending the meetings and whether the ANMs are explaining the topics in the right manner." What we heard from FLW respondents supports this finding. One particularly uninterested ANM's words are telling: "We are already very busy with our existing workload. If we get the order to conduct these meetings, then we will do it. We will see when we get those orders. If we are not able to do it well, then we will inform the district officials."

"Government officials have to feel a sense of ownership; only then will the interventions be successful in scale-up districts. For example, for the subcenter platform, someone should be there from the government side to check if the ASHAs and AWWs are attending the meetings and whether the ANMs are explaining the topics in the right manner."

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IV. INTERVENTION ACTIVITIES AT HEALTH FACILITIES

In addition to ensuring that households are given accurate and comprehensive information on important practices to follow before, during, and after delivery, the Ananya program also aims to improve the quality of services that households receive at the health facilities nearest to them. To achieve this goal, IFHI has implemented two interventions in block-level health facilities in the eight focal districts in Bihar. It works mainly with primary health centers (PHCs), which are clinics that perform deliveries and basic surgical procedures at the block level, and also a few subdivisional hospitals, which are larger than PHCs but smaller than the district hospitals. The interventions that IFHI has implemented at these institutions seek to improve the conditions of each facility as well as the capacity of key PHC staff. First, IFHI has initiated at the facilities a quality improvement (QI) process, whereby PHC staff conduct at their institution a structured assessment of infrastructure, equipment, supplies, and other resources; identify gaps; and develop a plan to address these deficiencies. Second, it offers onsite skills trainings to nursing staff that conduct deliveries and provide newborn care.[31] In the first phase of its implementation of facility-level programming, IFHI initiated the QI process at 71 facilities and skills trainings at around half of those institutions. It has since expanded skills trainings to all 71 facilities included in the first round of implementation, and the QI process to all block-level health facilities in the eight focal districts.

Like previous chapters, this chapter begins with an overview of the two interventions and summary statements and a narrative describing how the interventions were rolled out in the eight focal districts (Section A). In Sections B and C, we summarize our findings on how each intervention was implemented and what that might mean for its scale-up to the rest of Bihar.

Key findings from this chapter

- PHC staff found the paper-based facility assessment tool useful in conducting a comprehensive review of facility resources and used the assessment results to guide their facility improvement efforts.
- PHC staff relied heavily on IFHI to coordinate the quality improvement and facility assessment process, particularly with applications to the district for funds for large-scale improvements.
- Nurses and ANMs are enthusiastic about the trainings and have a high level of recall of the topics covered, which include practices and procedures related to hygiene and sanitation, infection control, delivery, and newborn care.
- A widespread shortage of nurses and ANMs, as well as their frequent transfers between facilities and time-consuming duties in the field, may limit the extent to which skills trainings can influence quality of care.

[31] Note that these skills trainings are for nursing staff working at health facilities (not at the community level) and focus on improving the knowledge and practice of delivery and newborn care techniques. They differ from the subcenter meetings discussed in Chapters II and III, which target frontline workers and aim to improve the quality of the family health information that households receive.

A. Introduction of the facility-level interventions

IFHI seeks to improve the quality of delivery and newborn care offered by PHCs in Bihar by tackling two important gaps. Its QI intervention offers facility staff a structured process for (1) identifying deficiencies in the infrastructure, equipment, supplies, staffing, and protocols needed to implement correct delivery, newborn care, and infection-control procedures; and (2) taking steps to address those deficiencies. Its skills trainings focus on improving the knowledge and capacity of grade A nurses and ANMs by providing them with in-depth guidance on how to conduct clean and safe deliveries and provide appropriate newborn care. Below, we describe in greater detail the various components of these interventions. We then summarize the steps IFHI took to begin implementation in the field.

Quality improvement. IFHI has facilitated several sequential activities as part of the QI process. First, the facility assembles a quality improvement team that is headed by the MOIC and includes facility staff at various levels. Once the team is in place, the PHC staff conduct a structured "facility assessment" of their equipment, supplies, infrastructure, staff resources, and implementation of key protocols. IFHI has developed for this purpose a detailed set of forms called the Facility Assessment Tool (FAT). This tool draws on existing standards set by the government but is also intended to capture in greater detail whether all necessary equipment, supplies, etc. are available at the facility and of appropriate quality. The forms include a series of paper-based checklists for each department in the facility—labor room, newborn care corner, maternity ward, operation theater, outpatient department, family planning, finance, and others—to track inventory at the facility and identify critical gaps (see Figure IV.1). IFHI also asks facilities to input the information in the hard-copy self-assessment forms into an electronic version of the tool. The software program, which CARE has installed on each PHC's computer, runs built-in algorithms on the data to generate "signal functions" of red, yellow, and green that indicate how well departments and areas are functioning and opportunities for improvement (see Figure IV.1).

After the assessment is complete and the gaps have been identified, PHCs are expected to develop an "action plan", which can be pulled directly from the electronic tool. IFHI envisions that the BHMs would use the dashboard generated by the electronic program to determine which gaps need to be filled, decide on a course of action, set time lines, assign responsibilities for each task, and track progress toward the established targets. According to one CARE district official, there are two types of action plan: (1) a "generic" action plan that sets minimum requirements for equipment, essential drugs, consumables, and other tools, and (2) a "comprehensive" action plan that is more detailed and focuses on larger scale changes, such as improvements in facility layout, infection control, and other factors. It is expected that the quality-improvement team will jointly assess progress toward these action items. At the team's monthly meetings, team members are expected to review the information collected by the forms, evaluate gaps, and discuss how to address them.

IFHI has also helped activate the District Quality Assurance Cell (DQAC), a committee responsible for reviewing the quality of services delivered at the PHCs in the district. The DQAC is led by the civil surgeon and also includes the district program coordinator, chief medical officer, deputy superintendent, district tuberculosis officer, district leprosy officer, district program manager (DPM), district monitoring and evaluation officer, and superintendents of the

district hospital. Several committee members, such as the DPM, focus on management or administration. Others, like the civil surgeon, have a medical or technical focus. IFHI envisions that DQACs will conduct visits to a few PHCs each month. During these visits, they might check on the ongoing assessment process, identify gaps, offer solutions, and suggest a time line for addressing insufficiencies.

Figure IV.1. Paper-based facility assessment form and electronic format with signal functions

Skills training. The Ananya program also aims to boost the skill level of nursing staff. Having improved facility conditions and ensured that labor rooms have all the necessary resources, it seeks to equip grade A nurses and ANMs with the skills to use those resources effectively to provide their patients with high-quality delivery and newborn care. Most individuals in these two staff positions have received at least one year of training for their jobs. However, much of this instruction is provided in a classroom setting, and nurses and ANMs have limited opportunities to practice new skills under the guidance of a mentor or supervisor. To strengthen the capacity of delivery staff, IFHI introduced "mobile training teams" in around half of the PHCs with which it was working. These external teams of nurses visit facilities monthly to provide delivery staff with both classroom and practical "on-the-job" training on important practices and procedures. Ideally, each facility also establishes a "mini skill lab," which is a room that contains all training materials and basic delivery and newborn care equipment. Nurses and ANMs can use this lab to practice the skills they are learning during the trainings.

CARE partner Everonn Skill Development Limited, a Chennai-based firm, runs the mobile training effort. It provides the trainers, who are nurses with bachelor's and master's degrees in science and also develops the session modules and coordinates the logistics for the trainings. CARE field staff are in touch weekly with the mobile training teams. CARE technical staff also attend the training sessions on occasion.

The mobile training teams, usually composed of two instructors, visit each facility for five consecutive days each month. On each day, they are typically present at the facility from 8 a.m. to 4 p.m. When the training intervention was initially conceived, it was thought that the teams might provide three weeklong training sessions at each facility. However, as the program evolved, IFHI felt nurses and ANMs might benefit from more intensive training. The Everonn team provides nine weeklong training sessions at each facility (over the course of nine months) to cover the range of topics related to safe delivery, detecting emergencies, hygiene, and infection control.[32]

IFHI engaged closely with district government officials to gain support for the quality improvement intervention and obtain the necessary approvals.

As with the community outreach interventions, close engagement with the government was key to rolling out the facility-level interventions. To initiate the quality improvement process, CARE district staff held a "District Visioning" workshop. Led by the district magistrate, and attended by the civil surgeon, other district health society staff, and MOICs and BHMs from all blocks, the workshop highlighted the importance of addressing quality of care at the facilities and walked all attendees through the goals and activities of the quality improvement process. In one district, CARE staff photographed poor facility conditions and shared the pictures with the district magistrate to give him an idea of the challenges they confronted. In another, they focused instead on the future, explaining the various elements of an "ideal hospital."

Having generated some commitment to addressing the issues, CARE was able to persuade district government officials to transmit the directive from the executive director of the State Health Society (that asked them to implement Ananya in their districts) to block-level staff, in the form of a detailed letter outlining the requirements for the QI process. This letter was particularly critical in getting the initiative rolled out at facilities with uninterested, undermotivated, or oversubscribed staff.

CARE selected for the skills training intervention the PHCs that seemed the most engaged in the Ananya program and that had made significant progress in bringing their labor rooms up to standard.

Of the 71 PHCs in the focal districts with which CARE was working in its initial phase of implementation, 32 were chosen for the first round of the intensive mobile training intervention, to keep the process manageable. CARE considered several factors in the selection process. First, it assessed the level of interest and enthusiasm displayed by the MOIC and BHM. Those that were closely engaged in the quality improvement process and saw the value of the Ananya program were more likely to be early recruits for the mobile training intervention. Second, CARE assessed the conditions of the labor room and the general readiness of the facility for the training team, given that instructors would need a functional labor room, newborn care corner, and other areas in which to demonstrate important procedures. For this reason, perhaps, CARE also looked at how far PHCs had advanced in the QI process to make its selection for the training intervention. Ideally, a facility would have conducted a gap assessment, developed an action plan, and taken steps to bridge some of those gaps before the mobile training teams arrived. Finally, one CARE district staff member cited remoteness as a selection factor. He reported

[32] In the second round of implementation, the training length was shortened to seven modules.

receiving a directive to seek facilities that were farthest away from urban or semiurban areas as candidates for the training rollout.

CARE once again requested government approval to launch the skills training intervention. It asked district government officials to issue a letter to the MOICs of selected facilities informing them of the training program and asking them to create a roster of potential participants.

B. Findings related to the quality improvement process

We spoke with MOICs, BHMs, and CARE district staff about the quality improvement intervention. Below, we summarize our findings related to each step of the process, including the formation of the QI team and its subsequent meetings, the use of the paper-based facility assessment tool and the electronic signal functions, the creation and use of an action plan, and applications for funding to finance facility improvements.

QI teams include PHC staff at various levels and typically meet once a month.

In general, to kick off the quality improvement process, IFHI district and block staff held a "visioning" meeting at each PHC. During the meeting, they explained the importance of increasing the quality of care at facilities, introduced PHC staff to the Ananya program, explained the steps of the quality improvement process, and helped form a quality improvement team. Each QI team is led by the PHC's MOIC and also includes—at a minimum—the BHM, an accountant, grade A nurses, and ANMs. Most PHCs, however, are more inclusive, integrating staff from across the facility, including the heads of various departments, an operation-theater assistant, a pharmacist, a lab technician, an accountant, a data operator, a block community mobilizer, custodial staff, and in some cases, a sanitary inspector and a member of the Rogi Kalyan Samiti (RKS; the committee that oversees the facility's finances).

During the November 2011 qualitative study we conducted to inform preliminary scale-up, some PHCs reported that they were unable to schedule regular quality improvement meetings, either because of an acute shortage of staff and/or because staff were overworked.[33] In our more recent data collection, however, almost all facilities said their QI teams met once a month, which marks an improvement. PHC staff report that QI team meetings are usually scheduled by IFHI, not PHC staff. However, some CARE district officials note that BHMs have recently taken over this function.

Regular team meetings increase accountability and provide a platform for assessing and addressing gaps.

At the meetings, which an IFHI staff member typically attends and may help facilitate, QI teams are expected to review the gaps identified by the facility assessment, discuss strategies for resolving those issues, and track their progress monthly on implementing those strategies. Several MOICs and BHMs reported that they ran their meetings with these objectives in mind. They noted that the meetings gave the QI process some structure by providing staff a regular

[33] Sambodhi Research and Communications and Mathematica Policy Research. "Findings from a Dipstick Study of Three Ananya Interventions Selected for Scale-up." Memorandum to the Bill & Melinda Gates Foundation, December 10, 2012.

opportunity to discuss challenges faced by the facility, develop a plan, and distribute responsibilities. One MOIC even said, "If not for the [team] meetings, nothing would get accomplished." MOICs also emphasize important practices during these meetings—for example, procedures to improve hygiene and sanitation. Some also use the meetings as an opportunity to kick-start the process of meeting requirements of certain accreditation programs, such as the International Organization for Standardization (ISO) and Family Friendly Hospital Initiative (FFHI) certifications.

"If not for the [team] meetings, nothing would get accomplished."

CARE district staff shed additional light on these comments from MOICs. One respondent felt that motivated MOICs and BHMs who care about improving the quality of care at their facilities might be able to effectively implement quality improvement processes without a formal team. However, for those not inclined to take that initiative on their own, the team and a regular meeting schedule help ensure that there is some progress made month by month. By including different levels of PHC staff, QI team meetings also increase the MOIC's accountability.

A CARE official told us that at one PHC, nurses had security concerns about their late-night shifts. They had raised this issue privately with the MOIC without much effect, but when they brought it to his attention in the public forum that the QI meeting provided, he felt compelled to investigate the matter further. He eventually hired security guards to monitor the facility during these shifts.

PHC staff find the paper-based tool useful in conducting a comprehensive review of facility resources but sometimes need CARE's help with coordinating the process.

Once the QI team has been formed, the block health manager typically manages the process of filling out the facility assessment tool. He distributes the checklists in the tool to the relevant departments and asks key staff in those divisions to complete the forms, which usually takes two to three days. He then collects the forms and notes any items that are missing as well as aspects of the facility that need improvement.

The BHMs with whom we spoke are uniformly appreciative of the facility assessment tool. Several find it useful because it offers a comprehensive and detailed listing of the minimum standards that a facility should maintain. One respondent said, "The best thing about this self-assessment tool is that it can identify the gaps in different departments of the PHC at the same time [such that] I don't miss anything." BHMs also feel the tool is particularly helpful for those with their (nonmedical) background. After using the FAT, they became more familiar with what equipment and medicines were needed in the facility and what infection-control practices should be followed in the labor room and operation theater. Finally, one respondent noted that the facility assessment focused on improvements that were within reach. Other assessment efforts—such as the facility review conducted for ISO certification—focused on significant infrastructural improvements that required the government to release additional funds, a time-consuming process with substantial bureaucratic hurdles.

"The best thing about this self-assessment tool is that it can identify the gaps in different departments of the PHC at the same time [such that] I don't miss anything."

CARE is closely involved in the assessment process, helping the BHM with coordination, explaining technical terms with which staff are unfamiliar, and on occasion completing the forms themselves. CARE block staff eventually also help with analyzing the information collected by the tool and identifying items that need to be procured, infrastructure that needs to be changed, and protocols that need to be implemented.

Few BHMs understand and use the signal functions in the electronic version of the tool.

Few PHCs understand how the signal functions work or use them to inform the quality improvement process. This lack of knowledge is rooted in several factors. Computer literacy is low, limiting the ability of MOICs and BHMs to use the electronic tool to assist with decision making. Also, the technology is poor, with computers in our sampled PHCs subject to frequent breakdowns or other system issues that prevent programs from functioning. Finally, the single computer in each PHC is oversubscribed. On many occasions, the facility assessment software program has been inadvertently deleted by a user unfamiliar with the QI process or the FAT. Given these constraints, PHC staff depend mainly on the paper-based forms to identify gaps and IFHI staff often took the lead on updating the electronic file. One BHM said, "The manual filling up of the facility assessment tool is better because the electronic tool is difficult to understand for most people."

There is some confusion about how frequently the facility assessment should be conducted.

PHC staff have different understandings of how frequently to implement the facility assessment. Respondents note that the FAT should be completed anywhere from once a year to once a month, resulting in varying levels of attention to prevailing gaps. A few PHCs conducted assessments before they formed quality improvement teams, perhaps affecting how carefully the facility tracked progress on resolving the identified deficiencies.

The facility assessment focuses more on identifying gaps in equipment, supplies, and infrastructure in the labor room and general facility infrastructure, and less on issues related to drug supply, staffing resources, and implementation of key protocols.

As noted above, the facility assessment tool is designed to uncover gaps across various types of resources at the facility, including equipment, supplies, medicine, infrastructure, and staffing. However, most respondents concentrated on identifying and addressing deficiencies in equipment and supplies, and to some extent in infrastructure. Not surprisingly, given the focus of Ananya, facility staff seem to have concentrated heavily on the labor room and operation theater. Items that were identified as missing from the labor room include:

- **Equipment:** delivery tray, ambu bag (a bag valve mask used to improve ventilation), oxygen concentrator, suction machine, blood pressure machine, IV stand, stethoscope, thermometer, weighing scales, labor table, autoclave, and color-coded receptacles for medical waste
- **Consumables and supplies:** needle cutters, catheters, cord clamps, gloves, masks, caps, slippers, mackintosh, and bleaching powder
- **Infrastructure gaps:** newborn care corner, attached washroom, service station, examination corner, rectangular basin with elbow tap, geyser for hot water, exhaust fan, window nets, curtains, floor tiles, step stools for each bed, and proper lighting

One respondent expressed some frustration about the QI initiative's focus on the labor room, saying that his PHC had made the effort to source as much of the equipment required for the labor room as possible, but CARE staff remained focused on the small percentage of items that were still missing instead of turning their attention to the facility's other needs. He believes he has equal responsibility to all departments of the PHC, but because the facility received a letter from the civil surgeon about the quality improvement process and the importance of improving MNCH services, he has had to shift more funds to the delivery department.

"The manual filling up of the facility assessment tool is better because the electronic tool is difficult to understand for most people."

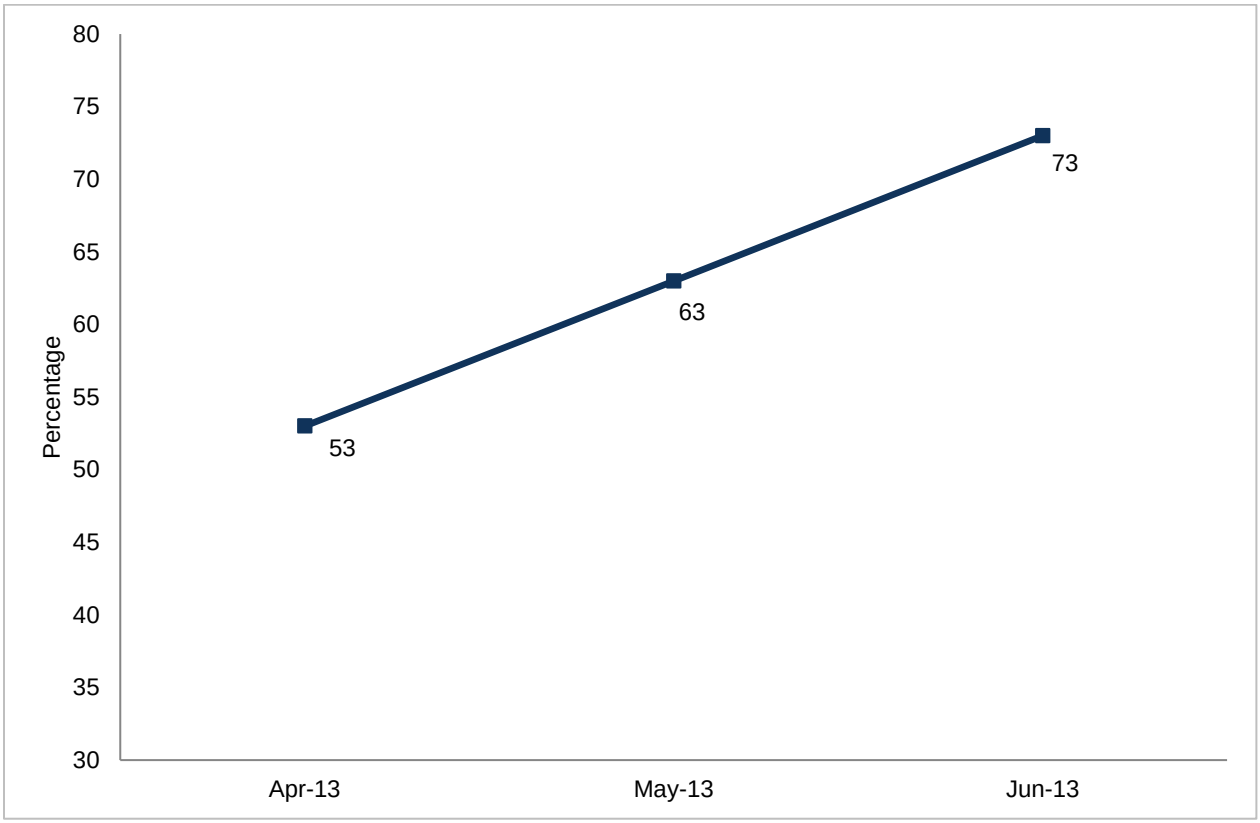
After the labor room, facilities seem to have prioritized the identification of general infrastructural deficiencies. These needs include fencing; message or sign boards detailing available services, fees, and important health information; and gardening or landscaping outside the facility. PHC staff also cited missing departments or rooms, such as a laboratory; a separate room for TB patients; a reception and waiting area; a male ward; an Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homoeopathy (AYUSH) practice; dental services; a nursing station; and a post-operative room. However, respondents said they were aware of those insufficiencies prior to the assessment.

Facilities also face critical shortages in staffing across all departments, especially of ANMs, nurses, gynecologists, and lady doctors. Again, respondents said that they were cognizant of these gaps before conducting the facility assessment. Only a handful of facilities discussed with us any gaps in pharmaceutical supply or the implementation of key protocols (for delivery and biomedical waste management). These areas were potentially not a central focus of the quality improvement process.

Facilities use the FAT results to guide their facility-improvement efforts but may not always generate and follow formal and written action plans.

In general, action plans seem to take lower precedence than other elements of the quality improvement process. Only one out of eight respondents reported that his PHC generated a written action plan from the electronic tool. This response may not be representative of all facilities, however. IFHI's monitoring data shows that 73 percent of the facilities with which it was working had developed action plans (see Figure IV.2). It is unclear how effectively these action plans were used once they were created. Although a few of the facility staff we interviewed noted that they had put together some sort of written document laying out their strategy for resolving gaps identified by the FAT, they seemed to be doing so mainly to fulfill the requirements set by CARE and the government. They were not using the action plan to map their process for meeting the goals that came out of the facility assessment.

Figure IV.2. Facilities where a comprehensive action plan has been developed



Source: Bill & Melinda Gates Foundation. "Ananya MIS 2013: Q4 (2012) & Q1, Q2 (2013) analysis." August 2013.

Note: All 71 PHCs at which IFHI initially rolled out the QI intervention have developed comprehensive action plans. The above graph includes all 131 PHCs with which IFHI is now working, of which 95 have generated an action plan.

Whether they are developing and using action plans as intended, PHCs do seem to be looking at the results of the facility assessment to assess next steps, and establishing processes to ensure that those steps are completed. For example, when one PHC discovered shortcomings in its infection-control practices, it established a goal ("Use only sterilized equipment during deliveries"), posted a chart in the newborn care corner detailing which practices should be followed and how frequently, and tracked whether ANMs were complying with these guidelines using a monitoring sheet.

Finally, there was some confusion regarding what the action plan entailed. A few PHCs mentioned that although they did not put together an action plan for CARE's quality improvement process, the BHM did create and submit to the District Health Society an Annual Block Action Plan, a government-facilitated mechanism for making requests for funding for facility improvements.

PHCs can pay for basic supplies and repairs using their locally administered funds but rely on CARE's help to obtain district approval and financing for larger improvements.

Each PHC has access to (and discretion over how to spend) approximately Rs. 175,000 of government funds each year. This sum (a combination of its annual maintenance grant, untied funds, and the resources allocated to and managed by its RKS (or Patient Welfare Committee) is typically used to pay for day-to-day expenses at the facility.[34] Half the facilities in our sample have relied on only these locally based funds to address the gaps they identified using the FAT, mainly to purchase missing equipment and consumables in the labor room and operation theater. The other half have also applied to various district sources of funding to make more substantial improvements, such as the installation of a newborn care corner.

In general, PHCs have not experienced difficulties in obtaining funds through the RKS. The MOIC leads the committee (which also includes other government officials, local pharmacists, NGO representatives, and community members) and is able to convene meetings to discuss spending as and when needed. The BHM is also a joint signatory, which allows him to also bring to the committee's attention any urgent budgetary needs and gives him access to Rs. 5,000 for discretionary spending on small repairs and requisitions. One respondent did note that once approved, RKS funds took a long time to reach the facility. He cited one instance in which his facility received the money on the last day of the financial year, when it could no longer spend it.

"The [funding] guidelines that the government sends come very late and are very difficult to understand. CARE helps us clarify what the guidelines are saying about how funding can be used."

Although PHCs generally do not have difficulties obtaining funds through the RKS for small purchases and fixes, they do depend heavily on IFHI's help with applications to the district (for approvals of larger scale improvements). Many respondents said they are unfamiliar with the sources of funding available to them. IFHI officials, however, can assess their needs and then direct them to the appropriate department or pool of funds. IFHI also provides technical support during the application process. Facility (and now QI) coordinators explain complex guidelines on what information to include in the requisition forms. They may also help define the budget details by researching unit prices of the requested equipment or supplies and/or by providing overall cost estimates. One PHC respondent said, "The guidelines that the government sends come very late and are very difficult to understand. CARE helps us clarify what the guidelines are saying about how funding can be used." IFHI continues to play a role once funding applications have been submitted. Relationships with key government officials such as the district magistrate and civil surgeon, allow CARE district staff to bring specific applications to their attention and expedite the release of funds.

Some District Quality Assurance Cells are conducting visits to PHCs, but they do not generally conduct a systematic review of facility resources and needs.

CARE district staff report that when they first began their activities in the field, the DQACs were almost entirely inactive. However, after engaging closely with district staff to introduce and

[34] Ministry of Health and Family Welfare. "Training Module on Financial Procedures Related to Key Schemes/Areas Under NRHM." June 2011.

get buy-in for Ananya and facilitate its rollout across each district, a few respondents report that they were able to spark some interest in taking district-level action to monitor quality of care. To implement the DQAC's mandate, key officials of the district health society are now increasing their presence in the field, conducting visits to PHCs in their charge, and interacting with doctors and other PHC staff.

According to CARE staff, the DQAC is supposed to visit five facilities each month. During those visits, the team should use a checklist (provided by CARE) to assess the status of each department. It should also check the QI register and walk through the facility to assess whether all of the gaps identified by the facility assessment have been addressed, and provide both on-the-ground and written feedback to the MOICs and BHMs on what needs to be improved. Out of the 23 PHCs we visited in focal districts (8 for the process study and 15 for the November qualitative study), 17 report having received visits from DQAC or high-level officials from the District Health Society. However, there was considerable variation—mainly by district—in the thoroughness of their review. While in one district, the DQAC divided itself into teams responsible for evaluating different departments or functions (for example, for infrastructure and human resources, equipment and supplies, and so on), in other districts, it conducted a more informal review. In most cases, the team did a walk through, pointed out observed shortcomings, and recommended next steps.

These findings are mirrored in the information we gathered from CARE district staff, some of whom noted that the government officials were themselves unsure of the value of the DQAC. In one district, the civil surgeon and other district staff formed the DQAC but with considerable reluctance; they felt it did not have the capacity to independently assess the quality of the facilities. In another district, the DQAC was entirely dormant at the time of data collection. It had not held any meetings or conducted any activities in the field.

Despite this lack of systematic DQAC activity, CARE district staff believe that DQAC visits can be very beneficial for the facilities. The oversight they provide can drive efforts to improve facility conditions. They can also help bring the facility's needs to the attention of district officials, who can choose to release funds from one of their sources to improve conditions at the facility.

PHC staff note that the QI process has resulted in improvements in labor room facilities, the introduction of new services, and a general increase in staff ownership of efforts to improve quality of care.

When asked what changes took place at the facility as a result of the quality improvement, most MOICs and BHMs cited advances in the labor room—in its stock of necessary equipment, supplies, and drugs, and availability of key infrastructural elements, such as a newborn corner, privacy partitions, and rectangular basin with elbow tap. They also uniformly reported that infection-control and waste-management procedures had improved and that staff generally paid greater attention to hygiene and sanitation. Few facilities had been able to purchase advanced machinery or make substantial infrastructural changes (such as building additional rooms). However, a number of PHCs have more easily achieved basic infrastructure improvements, such as constructing a boundary wall and landscaping the area within it, and installing sign boards listing available services and medicines and their fees.

A few PHCs have started offering new services after the quality improvement process. One respondent noted that his facility has now started performing C-sections. Another said the Outpatient Department (OPD) at his PHC now stayed open in the evening, as well. The QI process has been unable to address the critical shortages of key staff at these facilities. Overall, there is a cross-cutting human-resource shortage in Bihar that the government may be able to address down the road with concerted policy action, but is beyond the scope of the pilot phase of the Ananya initiatives in the eight focal districts.

"The staff at [my] PHC have been more informed and more confident following the QI process."

There is variation in how the quality improvement process has affected the views of PHC staff regarding their work and responsibilities. In some PHCs, the QI process has mainly resulted in the inflow of necessary labor room equipment and consumables. In others, however, there seems to be an increased sense of ownership among PHC staff. BHMs especially, as the primary coordinators of the quality improvement process, are more engaged in their work and perhaps more committed to enhancing the quality of care provided by their PHCs and improving their reputation. An MOIC respondent noted that the "staff at [his] PHC have been more informed and more confident about their work following the QI process." One member of the program staff said, "BHMs are now no longer talking about painting the walls in the name of quality improvement, but are going further by proactively participating in it, identifying the gaps, and applying for funds."

PHCs have good labor room conditions, in some respects, but still suffer from gaps.

To obtain a qualitative sense of the progress PHCs had made in improving facility conditions—and triangulate the reports of PHC staff—our field team conducted a simple checklist-based assessment of the labor room and general facility infrastructure. They observed whether labor rooms were stocked with key equipment and supplies, as well as their level of cleanliness. They also took stock of the condition of the buildings in which each PHC was housed.

Of the eight PHCs we visited for the process study, most appear to have the capacity to implement basic infection-control and waste-management procedures in their labor rooms (see Figure IV.3). They all have one or more functioning autoclaves, with a few also using bleaching powder and hypochlorite solution to clean equipment. They all have color-coded (red, black, and yellow) containers for the proper disposal of biomedical waste (though there may be some confusion about which types of waste correspond with which color) and usually employ an outside contractor to handle pickup and disposal.

In general, infrastructure conditions were good. For the most part, there was no water leakage into the rooms and the floors were tiled and clean. Access to important equipment and supplies was mixed. Although nearly all the facilities we visited had large delivery room machinery, such as a radiant warmer and phototherapy unit, there was in general a more limited stock of supplies and small equipment, such as stethoscopes, blood-pressure monitors, clean mackintoshes, and aprons or gowns.

Overall, the quality of the labor rooms we visited ranged from very high to very low. One or two are "model" labor rooms, in facilities with motivated MOICs and BHMs, which are

meticulously clean, fully equipped, and have all the necessary infrastructure. Several labor rooms have some but not all the necessary equipment and consumables, and their infrastructure may be of poor quality (for example, some lack running water). Finally, one or two labor rooms are in very poor condition. Although they may stock the required equipment, their sanitary conditions are neglected; for example, we found stagnant water on the floors; dirty beds, tables, and equipment; and used towels around the room.

Figure IV.3. Containers and protocols for biomedical waste disposal

PHC staff have varying levels of capacity for and interest in sustaining CARE's level of engagement in the self-improvement process.

IFHI's vision is that PHC staff will take full ownership of the QI process. However, it may be challenging to ensure that PHC staff maintain on their own the energy and attention to detail with which IFHI coordinators have tackled quality improvement efforts at these facilities. Below, we describe the various tasks that IFHI has undertaken to ensure that facility assessments are both properly conducted and regularly used to identify and address gaps. We then assess how ready—and how interested—PHCs appear to be in carrying forward these responsibilities.

As described above, IFHI is closely involved in facilitating the self-assessment process from start to finish. In addition to engaging with the district government and obtaining the necessary approvals, it works with the head of each facility to generate interest and momentum. Its field staff facilitate the formation of a QI team, attend all team meetings, and ensure that the facility assessment takes place and that staff understand all technical terms. PHCs rely on IFHI even more after the facility assessment is complete. IFHI staff play a crucial role in taking the information that has been collected and figuring out what improvements need to be made and how. Based on the gap assessment, IFHI coordinators suggest layout changes and infrastructural improvements and help the BHM identify what equipment and consumables are missing. They also provide technical assistance as facilities apply for external sources of funding for those improvements. One respondent at a PHC said, "CARE is always here to give us new ideas and to facilitate each and every step of what it suggests."

There is variation in the extent to which PHCs seem ready to take the quality improvement process forward without CARE's assistance. Some "model" PHCs with motivated staff will likely take the initiative to continue QI team meetings and regularly assess and resolve gaps. Others have more uncertain capacity and follow-through. Although staff at several of the facilities seem interested in improving the quality of the services provided, they are also stretched very thin and have little incentive to work overtime on little pay to follow directives that no one is explicitly enforcing. One MOIC said, "I want to continue the process even after CARE leaves, but there has to be someone to remind me about addressing the gaps. I already have a lot of work and might forget to look into the gaps if I don't get reminders." Another argues that "self"-assessment is unsustainable. He notes that those who are now involved in the QI process should have been mindful of issues related to quality of care prior to the intervention and that the reason they are now more attentive to these concerns is IFHI's oversight and frequent reminders of what steps to take. He feels that only external supervision will ensure that PHC staff stay accountable and continue their work on quality-improvement efforts.

"I want to continue the [QI] process even after CARE leaves, but there has to be someone to remind me about addressing the gaps. I already have a lot of work and might forget to look into the gaps if I don't get reminders."

IFHI officials are aware that building a sustainable QI process requires considerable legwork on their part. The district staff we interviewed, however, reported that the amount of effort they need varies from PHC to PHC. They noted that some BHMs are more capable than others and quick to learn how to manage the process, while others need five or six months of orientation before they feel ready to take the reins.

In nonfocal districts, a few PHCs are undertaking basic quality improvement efforts but do not use a structured assessment to identify gaps.

Although efforts to improve conditions in the facilities we visited in nonfocal districts were generally less formalized than the Ananya quality improvement process, they did have teams responsible for assessing gaps on an ongoing basis. In a few cases, respondents noted that they had recently received a directive from the district health society to form a team, while in others, the RKS did this work. At one PHC, an NGO had facilitated the process of forming an internal committee that assessed and addressed facility needs as part of an effort to achieve ISO certification.

Although there are teams in place to take the lead on quality improvement, the appointed individuals do not appear to conduct regular meetings. In practice, this approach might reduce the frequency with which facility staff identify insufficiencies, develop solutions, and review progress. Facility staff also do not use any formal assessment form; they generally discuss the gaps among themselves, talk about potential solutions, and divide responsibilities. This lack of structure may lead to oversights in review and increase the likelihood that important equipment and supplies will not be available.

Most facilities took care of the insufficiencies they identified using RKS and annual maintenance grant funds. The facility with an internal committee also obtained a No Objection Certificate (a type of clearance) from the Pollution Control Board in Patna with the NGO

representative's support, as well as DHS assistance with building a newborn care corner. Other than this, however, few changes seem to have come about as a result of these quality improvement efforts.

C. Findings related to the skills training intervention

The skills training intervention was rolled out after the quality improvement process, once PHCs had the labor room supplies, equipment, and infrastructural elements that trainers would need to demonstrate delivery and newborn care procedures. Below, we summarize our findings related to training preparation and content and assess implications for sustainability and scale-up.

Nurses and ANMs are enthusiastic about the trainings and have a high level of recall of the topics covered, which include practices and procedures related to hygiene and sanitation, infection control, delivery, and newborn care.

The nurses we interviewed had a high level of recall of the topics covered during the training and said the information was communicated clearly and easy to understand. There was some concern, especially among MOICs and BHMs, that the nurses might have difficulty following the Tamil-speaking trainers from Everonn. However, most ANMs and PHC nurses said they had no trouble understanding what the instructors were saying, and reported that some had even improved their Hindi since the beginning of the training. In general, respondents were enthusiastic about the trainings. They felt that the sessions offered more detailed instruction than they had previously received and reminded them of important procedures and protocols. One PHC nurse said that the level of detail was particularly critical for ANMs who had recently been transferred from subcenters to PHCs. These individuals have received less training than grade A nurses.

When we conducted our visits, most PHCs had completed between four and six of the nine training modules. The nurses and ANMs we interviewed mentioned being trained on the following:

- Topics related to hygiene and sanitation and infection control, including types of hand washing (surgical, medical, and social); sterilization of equipment using the autoclave and chlorine solution; biomedical waste management; and how to wear and remove gloves, masks, gowns, and aprons
- Details of the four stages of labor
- How to conduct a physical examination of patients and track the progress of their delivery—for example, how to use a partograph; measure the patient's pulse, blood pressure, and temperature; and use palpation
- Use of delivery-related equipment, such as the mucus sucker, ambu bag, oxygen cylinder, radiant warmer, and phototherapy unit
- Active management of the third stage of labor
- Newborn care, including skin-to-skin care, breastfeeding practices, bathing, and swaddling
- Recognizing and addressing delivery complications for mothers (such as postpartum hemorrhaging, types of water discharge, and perineal tears)

- Recognizing and addressing complications for newborns (such as sepsis, lack of oxygen, rapid respiratory rate, and anemia)

The trainings included a significant practical component, with instructors observing and providing input while ANMs and nurses conducted deliveries.

In addition to the classroom sessions, during which instructors show participants videos on key elements of delivery and newborn care, such as skin-to-skin care and breastfeeding practices, and use dummies or models to demonstrate important procedures, the trainings also have a sizable practical component. The ANMs and nurses we interviewed reported that trainers observed them while they conducted deliveries, provided immediate newborn care, and offered feedback on what they could improve in the future (for example, active management of the third stage of labor). One respondent reported that prior to doing observations, the instructor herself conducted several difficult deliveries and explained the procedures as she was implementing them. The instructors seem to have integrated this element of training into daily activities at the facilities. For instance, one nurse mentioned that at times that nurses were called away from the training to attend to patients, instructors divided responsibilities, with one continuing the session and the other accompanying the nurses who had to step out to observe and provide advice. In general, nurses and ANMs found the practical component of the training very useful. One respondent said, "The practical parts of the training help me remember what I have been taught. I learned a lot of new things—how to use an ambu bag and radiant warmer properly, and how to do a perineum stitch. I am able to give better advice to my patients and their families now."

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Only around half the facilities were able to set up a mini skill lab, but most ANMs and nurses felt their facilities had all the tools they needed to practice what they had been taught during classroom sessions.

A few facilities have set aside separate rooms for the mini skill labs. These rooms have models and sample materials available for practice at all times and are positioned close to the labor room and newborn care corner so that trainers can easily demonstrate important techniques and practices. Others have not been able to set aside a separate room for this purpose, with most converting the nurse or ANM duty station, or a meeting hall, into a temporary training room when the mobile teams are on the premises (see Figure IV.4). As for the equipment, PHCs were generally in charge of obtaining the equipment and supplies for the labor room. In all districts, CARE provided a mannequin that trainers could use for their presentations. In a few districts, CARE also provided a demonstration table and some of the missing labor room equipment.

Although not all facilities had mini skill labs, nurses and ANMs generally reported that they had access to all the labor room instruments they needed to practice or implement the procedures covered by the training. This improvement marked a significant change from our November 2011 study, when several ANMs and nurses had not been able to practice what they had learned because they lacked the necessary equipment and supplies.

Nurses and ANMs are following several important practices related to hygiene and sanitation and newborn care but are less meticulous about tracking key parameters during delivery.

To gain an understanding of the extent to which nurses and ANMs were implementing what they learned during trainings, we asked respondents several types of questions. First, before we began discussing the trainings, we asked them to describe the delivery, newborn care, and infection-control procedures they usually implemented. We then asked for their own impressions of how the care they provided had changed as a result of the skills training. Finally, at the end of the interview, we asked them to: (1) answer a short list of multiple choice questions that tested their knowledge of key delivery and newborn care practices, and (2) think back to their most recent delivery and report (when possible using a bed head ticket or other written records) on the vital signs they monitored during delivery.

Figure IV.4. Mini skill lab

(i) IFHI and Everonn established the first mini skill lab with a full set of models and sample materials.

(ii) Most mini skill labs are meeting rooms in which trainers provide instruction.

Source of (i): Everonn Skill Development Limited. "ESDL, CARE India Launch India's First MCH Mini Skill Lab and Mobile Training in Bihar." February 24, 2012. Available at [http://www.everonnskill.com/ns/docs/Bihar-soft-launch-report.pdf]. Accessed January 21, 2014.

When asked to describe any improvements in their delivery and newborn care practices subsequent to the trainings, ANM and nurse respondents said they had a better grasp on how to operate the various machines in the delivery room and newborn care corner. They also reported that they were more thoroughly implementing infection-control procedures. Some told us they revised certain practices as a result of the trainings. One respondent said she and her coworkers cleaned the baby with only a cloth and no longer applied oil. Another said she now wrapped the baby in a towel after delivery, instead of placing him or her on a tray.

MOICs and BHMs feel that nurses were generally more confident and efficient as a result of the trainings. They take the time needed to implement procedures correctly and do not rush through important procedures. Their decision making ability has improved. For instance, they are able to determine which cases need to be referred to another facility and which cases they can handle onsite. Processes have overall become more systematized. For example, nurses and ANMs now pass on patient history when handing off cases to one another.

Now, on the basis of respondents' descriptions of the delivery and newborn care practices they typically followed, reports of procedures they implemented during the most recent delivery they conducted, and answers to a short quiz to test their technical knowledge, we provide a qualitative sense of their competencies in delivery and newborn care. When asked to describe how they typically prepared for delivery, almost all respondents were well-versed in the key steps of hand washing and reported that they used either disposable gloves or sterilized nondisposable gloves. However, they all used the same apron throughout the day (because of a shortage of aprons), and only a few noted that they wore a mask and cap. We assessed delivery care by asking respondents to tell us the vital signs they monitored during the most recent delivery they conducted. Most reported tracking cervical dilatation, pulse, and blood pressure, but paid less attention to other parameters, such as uterine contractions, fetal heart rate, where the head is stationed, and the position of the child. When asked about the active management of the third stage of labor (AMTSL) in the quiz portion of the interview, around half of the respondents listed the steps it entailed, but fewer could explain what to do in the case of severe bleeding after placenta delivery. Our interviews also indicate that recordkeeping during deliveries was scant. Very few used a partograph and bed head ticket, with most either partially recording observations in a notebook or other form, and others failing to note any of the key parameters.

When asked to describe the newborn care practices they typically followed, almost all respondents said they facilitated skin-to-skin care and breastfeeding, administered clean cord care, and checked the baby's weight after delivery. Advice related to breastfeeding varied; all respondents initiated breastfeeding within 5 and 30 minutes after delivery, but fewer reported that they advised against prelacteals or discussed exclusive breastfeeding, how to position the child for breastfeeding, or breast care. In answering our questions on general post-delivery practices, respondents generally displayed a good understanding of how to identify and treat newborn danger signs (especially asphyxia and low birth weight). In addition, the quiz revealed that they were familiar with all the key elements of a postpartum examination for the mother.

A widespread shortage of nurses and ANMs, as well as their frequent transfers between facilities and time-consuming duties in the field, may limit the extent to which skills trainings can influence quality of care.

Several CARE district staff noted that there were considerable difficulties in identifying nurses and ANMs to attend the trainings. There is a general shortage of individuals in these positions. PHC and CARE staff also reported frequent transfers and deputations of nurses and ANMs, which means that both the individuals who move to other facilities and the staff who replace them receive only partial training. Nurses and ANMs also get pulled away by government initiatives such as the pulse polio program or family planning operation camps, as well as routine work at what are extremely short-staffed facilities. One ANM said, "The training is helpful, but we do not have much time to participate in it because we have to go into the field

or conduct deliveries during training days." One respondent told us that the number of participants declined steadily from session to session, with eight to nine people in December 2012, four to five in January 2013, and only two in March 2013. Even the respondent was able to attend only two days of the last five-day round of training. One BHM put forward a suggestion to address this issue of availability. He recommended that IFHI train at least 10 ANMs (instead of 6), so that even if a few are transferred, the others would be able to preserve institutional knowledge related to labor room and OT conditions, as well as to the specifics of delivery and newborn care services, and pass it to incoming staff.

"The training is helpful, but we do not have much time to participate in it because we have to go into the field or conduct deliveries during training days."

MOICs may be more motivated to facilitate trainings that affect outcomes tracked by the government.

One IFHI district staff member noted that it was difficult to get the buy-in of MOICs in his district, because they were mostly interested in pursuing interventions that helped them improve outcomes tracked by the district health society. Reportedly, they did not see much value in trainings on personal protection (that is, how to protect oneself from infection), basic nursing care, and other areas. The respondent noted that they would have more easily recruited MOICs for the intervention had they been able to offer trainings on IUD insertion (which the government tracks as part of its Health Management Information System, or HMIS). However, the mobile team instructors were themselves not trained on this procedure. IFHI had a family planning expert and technical coordinator conduct a joint training on IUD insertion for both the mobile team instructors and the nurses and ANMs.

Beyond the Ananya program, the government may want to prepare nurses to act as onsite master trainers.

One of the factors that most greatly impedes the quality of services provided by ANMs and grade A nurses is their lack of practical training. For their degree or diploma, they all receive a set amount of classroom instruction. After that, however, they are forced to put into practice with very limited oversight or guidance the theoretical concepts they have learned. IFHI's external trainers are trying to remedy this situation. As noted above, they observe as ANMs and nurses conduct deliveries and provide newborn care and offer targeted input on what to correct in the future. In the long term, however, one respondent suggests that the government may want to train one or two nurses to act as master trainers at each PHC, so that the staff who conduct deliveries improve their skills on an ongoing basis.

In nonfocal districts, supplementary trainings are offered to nurses and ANMs, but not on a systematic basis and not onsite at their own PHCs.

ANMs and nurses in some of the nonfocal district facilities we visited had attended the Integrated Management of Neonatal and Childhood Illness (IMNCI) training, a six- to eight-day offsite program facilitated by UNICEF. Respondents reported that this session provided information on how to identify and treat various illnesses and conditions, including diarrhea, asphyxia, fever, and malnutrition, and how to use equipment, including an ambu bag, oxygen concentrator, radiant warmer, and phototherapy unit. A few of the nurses and ANMs we interviewed in nonfocal districts cited other trainings, as well, such as a three-day IUD training,

a one-day Navjaat Shishu Suraksha Karyakram (or Basic Newborn Care and Resuscitation Program),
a two-day Newborn Care Center (NBCC) training, and other unspecific initiatives. All of these trainings were offsite, usually at the district headquarters, which means they could not provide the "on-the-job" training that the IFHI sessions offered. They also typically entailed one-time, nonrecurring sessions. As a result, they may have been less intensive than IFHI's skills training (given that they were not reinforcing important concepts and practices by repetition over many months).

Overall, nonfocal facility staff note that nurses and ANMs display greater confidence. Some specific cases of improvement they cite include usage of masks and gloves during delivery, implementation of correct hygiene and sanitation practices, ability to control bleeding after delivery, and correct usage of equipment in the newborn care corner.

D. Conclusion

Overall, the quality improvement process and skills trainings have been received positively by PHC staff. Facilities are working to improve labor room conditions and general infrastructure, and enhance the abilities of ANMs and nurses to provide high-quality delivery and newborn care. Respondents find the facility assessment tool very useful, as it provides a reference manual of sorts of key requirements each PHC needs to meet. They generally do not use the electronic signal functions or develop formal action plans but are looking at facility assessment results to detect inadequacies and determine what steps to take. PHC staff are also appreciative of the skills trainings and have a high level of recall of the topics that trainers discussed. Although several PHCs were unable to designate separate rooms as mini skill labs, this deficiency did not seem to be a barrier to training efforts.

As the Ananya program expands to other districts, IFHI will have to consider several contextual factors that affect the sustainability of its interventions at the facility level. The success of the QI intervention seems to require a committed and engaged PHC staff as well as a deep involvement from CARE district and block level staff in identifying opportunities for improvement and applying for external funding. IFHI will have to think creatively about how to motivate PHC staff and empower them to not only conduct comprehensive facility assessments but also analyze and act on their results. The training intervention will also contend with systemic challenges. Shortages and regular transfers of ANMs and nurses, as well as their heavy workload, may shrink the pool of those who are able to benefit from the in-depth instruction the mobile training teams are providing.

As we assessed the implementation efforts across the two facility-level interventions, we found that the PHCs with the most engaged and motivated MOICs have also seen the largest improvements. These MOICs find value in the self-assessment process, and actively use the information on gaps as opposed to treating the tool as just another source of paperwork. They put in the work necessary to set up the skill labs and mobile trainings. Further, they motivate the staff who report to them to take the quality improvement process seriously and make the effort to address shortcomings in both the conditions of the facility and the quality of the services provided.

In small ways, IFHI district staff are already working to engage MOICs more closely. In one district, the district manager keeps a high-level tally, based on a few basic indicators, of which PHCs are doing well and which have not made much progress. He then shares that list with district government officials, asking them to intervene in cases that are lagging behind. He also brings together in the same room MOICs from different blocks and reports on the substantial support from CARE and the government that the best-performing PHCs have received, and the significant improvements these facilities have been able to make as a result. This approach has aroused competitive instincts in some of the MOICs who were previously uninterested in CARE's work and has led them to turn to the Ananya intervention with a new sense of purpose.

IFHI will have to continue thinking of ways to incentivize positive behaviors amongst the PHC leadership as it scales up to the other 38 districts. Informal encouragement of competition across blocks, linking program activities more closely to indicators the government tracks for each facility, or the provision of other direct or indirect incentives, are all potential strategies for encouraging MOICs to be more proactive in improving the quality of care provided by their PHCs.

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V. LESSONS FOR SCALE-UP

The Ananya program began in the spring of 2013 the initial process of scaling up by selecting eight additional districts in which to introduce key program interventions and obtaining approvals from district government officials to launch implementation. Since then, however, scale-up efforts have been incorporated into the work of a newly created technical support unit (TSU), which was established by the Bill & Melinda Gates Foundation at the request of the government of Bihar (GoB) to oversee family health activities across Bihar. Below, we offer a brief summary of what we learned from program staff about early scale-up efforts. We then present high-level findings related to the sustainability of the Ananya interventions that may be relevant as the program scales up.

A. Approach to scale-up efforts

The Ananya program has taken two approaches to scale-up over time. As per the original plans, the grantees had primary responsibility for scaling up to the rest of the state in a phased manner after two years of program implementation in the eight focal districts. However, just as this initial expansion began, scale-up was integrated into NRHM's efforts to intensify reproductive, maternal, newborn, child, and adolescent health (RMNCH+A) services in priority districts in India. We describe both of these approaches below.

In early 2013, IFHI and SDP staff worked together to identify eight districts that would be suitable for the first round of scale-up. They mainly selected districts adjacent to each of the eight focal districts so that field staff in the focal districts would be able to extend their support to scale-up areas. In selecting the districts, they considered key DHS indicators. In addition, they reviewed other factors, such as human resource capacity and the enthusiasm and interest of district government officials.

Given that district staff had an in-depth understanding of the type of government engagement and infrastructure needed to launch and run the Ananya interventions, IFHI gave its district managers some autonomy in deciding how to initiate scale-up in the new districts to which they had been assigned. Although their approaches were not drastically different, they did vary in how they gained government buy-in (for example, the number and types of introductory meetings they conducted with senior and junior government staff) and the degree to which they engaged government staff from the start (for example, whether CARE or the facility staff took the lead on forming the quality improvement teams at facilities). The plan was that, after a six-month trial period, senior program management and staff would come together and assess the most successful elements of these approaches. They would then develop a range of solutions or best practices for initiating Ananya interventions in nonfocal districts.

SDP aimed to take a more uniform approach across the districts. Its plan was to develop a basic IPC module for subcenters in the scale-up districts and have ANMs deliver the most straightforward elements of the IPC training. It would then prepare block community mobilizers (who supervise ASHAs) to act as the master trainers and provide the main IPC trainings in pairs. BBC had included costs for Mobile Kunji production and the rollout of IPC trainings in the scale-up districts the program implementation plan (PIP) of the State Health Society (essentially

a detailed budget and proposal for yearly spending). The government would also take on the costs of airing the radio program *Khirki Mehendiwali*.

In fall 2013, the approach to scale-up was revised in response to changes at the national level. NRHM introduced a new RMNCH+A strategy and designated the Bill & Melinda Gates Foundation as the lead development partner in Bihar,[35] responsible for coordinating the family health-related programs of all development agencies active in the state.[36] The government of Bihar has also requested assistance in improving nutrition outcomes, both as part of the *Manav Vikas* (Human Development) Mission and the ICDS Systems Strengthening and Nutrition Improvement project. Finally, the state government has also expressed interest in receiving targeted technical assistance on policy and programming related to family planning.

To implement the activities under this strategy, in November 2013, the foundation established a TSU. This committee leads the implementation of the intensified RMNCH+A strategy across Bihar and includes staff from the various Ananya partner organizations as well as representatives of other development partners. It includes technical, management, and evaluation units, along with district and block functionaries. The TSU has five key objectives:

1. "Support state-, district-, and block-level program leadership of GoB (health and ICDS programs) to drive effective implementation and data-driven management of RMNCH interventions across Bihar

2. Support health and ICDS programs to design and implement effective community-level strategies and solutions to improve the coverage and quality of essential family health interventions across the state of Bihar

3. Support health programs to design and implement effective strategies and solutions that improve access to and quality of essential maternal, newborn, child and family planning services in facilities across the state of Bihar

4. Support GoB Health programs to improve the reach, coverage, and quality of essential maternal, newborn, child, and family planning interventions by engaging private providers across Bihar

5. Support GoB to increase accountability and responsiveness of family health services to community needs and community engagement in health system quality improvement"[37]

To achieve these goals, the TSU will scale up elements both of Ananya interventions and of other development partners' efforts that the government believes will contribute to RMNCH+A goals. In particular, the TSU will work closely with the government to strengthen the systems needed to ensure the sustainability of these initiatives. Some of the primary community-level

[35] The foundation is also the designated lead for RMNCH+A initiatives in Uttar Pradesh.

[36] Other key development partners in Bihar include DFID (which runs the BTAST program), UNICEF, UNFPA, NIPI, and WHO/NPSP.

[37] CARE. "Technical Support to the Government of Bihar: Improving Health, Nutrition Coverage and Outcomes." Submitted to the Bill & Melinda Gates Foundation on August 29, 2013.

Ananya activities that the TSU will help scale up are the trainings, job aids, media programming, and enumeration and mapping work discussed in this report. In addition, the TSU will relay family health messages via VHNDs and undertake community mobilization efforts (through both Ananya grants and the programs of other development partners). At the facility level, the TSU will scale up the quality improvement and nurse training interventions, but also offer skill training to doctors. The TSU also aims to extend the reach of private providers by streamlining the accreditation process and helping identify potential candidates for accreditation in high-burden areas.

The TSU also has a strong social-accountability mission. Building on the community mobilization work of Ananya and other development partners, it plans to increase households' awareness of their rights to family health services, facilitate tracking of service quality by community groups and village committees, and install mechanisms for citizens to submit complaints. The TSU also aims to build the government's capacity in the long term to integrate these efforts into its family health services. Specifically, it will work on issues related to human resources, supply chain management, the collection and use of monitoring data, program management, and equity of services.[38]

B. Broad lessons for scale-up efforts

In Chapters III and IV of this report, we described successes and challenges in implementation, which can be useful for program improvement efforts. Here, we flag three broad findings that have significant implications for scale-up and elicit high-level lessons that may be useful as program staff expand Ananya interventions to the rest of Bihar. First, our interviews brought into the light the extent of the new responsibilities PHC staff and FLWs were being asked to take on as part of the Ananya program. ASHAs and AWWs were encouraged to increase the regularity of home visits, engage in more intensive planning and record-keeping, and to expand their focus beyond the motivation of incentivized practices and provision of supplementary nutrition to the coverage of services all along the family health continuum of care. ANMs were asked to lead (and also help plan) subcenter meetings over and above their usual responsibilities, which include a heavy immunization burden. PHC staff were asked to conduct detailed facility assessments, hold regular QI team meetings, develop action plans, and attend intensive skills trainings in addition to their already long list of management and service provision responsibilities. Government health workers and staff have been managing to complete these intervention-related duties with significant facilitation and oversight from CARE and BBC. As scale-up occurs, however, program staff will have to consider how to ensure that these activities continue without regular or intensive participation from their side. From our interviews we identified two potential approaches to addressing this challenge (summarized in the first two lessons below).

In addition to motivating the completion of additional duties, another challenge for scale-up is the shortage of key service providers. Trainings that aim to improve health outcomes by enhancing the technical knowledge and skills of providers cannot have their intended effect if the supply of those providers falls short of demand (discussed in the third lesson below). Finally, the

[38] CARE. "Technical Support to the Government of Bihar: Improving Health, Nutrition Coverage and Outcomes." Submitted to the Bill & Melinda Gates Foundation on August 29, 2013.

process study gathered useful information on health worker perceptions of trainings they received—both from the government and through Ananya. The fourth lesson below discusses the merits of CARE's handholding approach to training and mentoring these health workers and service providers.

Requiring or incentivizing participation in Ananya programming will help strengthen the sustainability of both community- and facility-level interventions.

Not surprisingly, given that grantees worked hard to set up and implement the Ananya interventions, several health workers view the interventions mainly as CARE and BBC programs instead of an ongoing government initiative to improve quality of care. With the exception of a few highly motivated individuals with a strong interest in improving the health status of their community, most government workers do not think intervention activities fall under their job description. For example, ANMs think sub-center meeting facilitation is CARE's responsibility, and find it particularly challenging to assume a greater leadership role given their very high immunization workload. For the TSU's programs to be sustainable, it will be important to identify ways to ensure greater participation of health workers in the absence of the intensive efforts of CARE or BBC field staff. It would be helpful to integrate into the more routine duties of government staff several functions, including the planning of subcenter meetings and IPC trainings, conducting those sessions, field visits to oversee enumeration and name-based tracking, conducting facility assessments and devising action plans, and organizing ongoing skills trainings for hospital staff.

It will be important to consider how best to incentivize government staff to take ownership of these new roles and functions. The government may need to either explicitly require its workers to perform these program activities, or tie the interventions (or participation in intervention activities) to indicators it tracks and for which it sets targets. The Ananya program has used the latter approach in its initiative to provide instruction to grade A nurses and ANMs on IUD insertion, an indicator that is tracked by the government. Using a similar strategy systematically across several intervention elements may increase the likelihood of adoption and follow-through by both district and block government officials.

Close monitoring and oversight of intervention activities in the field will also be critical to ensuring that activities are implemented effectively.

In addition to taking responsibility for the implementation of Ananya and other grant activities, it will also be important for the health sector to incorporate into its work the monitoring activities that program implementers currently execute. The IFHI and SDP district and block staff we interviewed feel strongly that one of the main ways to ensure that interventions are rolled out effectively is to have the government increase its field presence and closely monitor and oversee all program activities.

In the focal districts, government workers played a key role in *initiating* the interventions. For example, the state government approved the program rollout, which helped Ananya staff obtain the buy-in of district officials; similarly, a letter indicating district government approval ensured that block officials got on board and began intervention activities in the field. However, government engagement beyond program rollout was fairly limited. Officials at the district or

block levels showed varied levels of familiarity with elements of the Ananya program, and few went regularly into the field to oversee activities.

The program staff we interviewed suggested that it would be useful for government officials to increase their presence on the ground. For instance, block-level staff such as the MOIC, BHM, BCM, and other officials could more frequently visit subcenter meetings and IPC trainings, and district officials could increase their involvement in the monitoring and oversight of activities at block health facilities. Some program staff also emphasized that it is important to put strong DQACs into place right away in scale-up districts. These cells, and similar structures or processes at the block level, will be critical to increasing the accountability of health workers and ensuring that government staff are attuned to implementation needs on an ongoing basis.

Addressing human resource shortages will be critical to the sustainability of program interventions.

The Ananya program has focused on addressing two critical gaps in the health system in Bihar—the quality of care provided by health workers involved in maternal and child health, and the material resources (that is, infrastructure, equipment, and supplies) of government hospitals, particularly their labor rooms. However, another important gap—the tremendous shortage of health staff, particularly at the block level—has strained these efforts and limited their ability to effect positive change. For instance, nurse and ANM positions are frequently unoccupied. Also, frequent transfers of ANMs across public health facilities can lead to gaps in training. In addition, ANMs' time is highly scheduled, and prioritized for vaccination activities. Some MOICs have also cited the shortage of female doctors who can provide oversight to nurses and ANMs in the labor room, which male doctors cannot generally visit.

Given this context of competing priorities and understaffing, targeted populations may receive incomplete care despite efforts to improve family health services via training. These conditions increase each individual's workload, reduce staff attention to less than extremely urgent tasks, and even pull nurses away from skills training sessions. Although this human resource issue has been beyond the scope of the Ananya program thus far, the TSU may be able to address this gap going forward. Working with the government to dispatch staff to where they are most needed will help maximize the impact of Ananya and other RMNCH+A interventions.

It is important to continue encouraging and motivating health workers, who have concerns about their skills and capacity and may be intimidated by those in positions of authority.

In addition to discussing the above structural improvements, the program implementers we interviewed also shared their thoughts on the best approach to implementation. They note that their main strategy for stimulating the interest of health workers is to always be encouraging of the staff they are training, present plenty of positive input, and ensure that their feedback on areas for improvement is tactful and constructive. There are many examples of this approach across the program. During subcenter meetings, frontline workers are encouraged to ask questions, and if a topic is particularly confusing, keep asking questions until they understand it. The FLWs are encouraged to voice their doubts and even to reach out to CARE staff outside meeting hours if they have any difficulties in the field. This method extends to other intervention elements, as well. After home visit observations, for instance, program staff take particular care

to emphasize frontline workers' successes and express appreciation for their contributions before explaining which areas could use improvement.

Program staff feel that their explicit effort to motivate health workers distinguishes Ananya from other health initiatives in the state. Accustomed to trainings at which doctors or government staff berate them for not knowing or understanding critical practices, health workers are encouraged by the positive approach that Ananya program staff take and motivated to improve their work despite a heavy burden and low pay. It is important that scale-up districts also adopt this approach to training and guidance. Eventually, as government staff assume responsibility for Ananya and other TSU-focused efforts in Bihar, it will be helpful for them to learn about not only the content of the interventions, but also the approach to implementing those interventions and communicating with health workers.

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