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USAID
ASSIST PROJECT
*Applying Science to Strengthen
and Improve Systems*

USAID ASSIST Project

India Country Report FY14

Cooperative Agreement Number:

AID-OAA-A-12-00101

Performance Period:

October 1, 2013 – September 30, 2014

DECEMBER 2014

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DISCLAIMER

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For more information on the work of the USAID ASSIST Project, please visit www.usaidassist.org or write assist-info@urc-chs.com.

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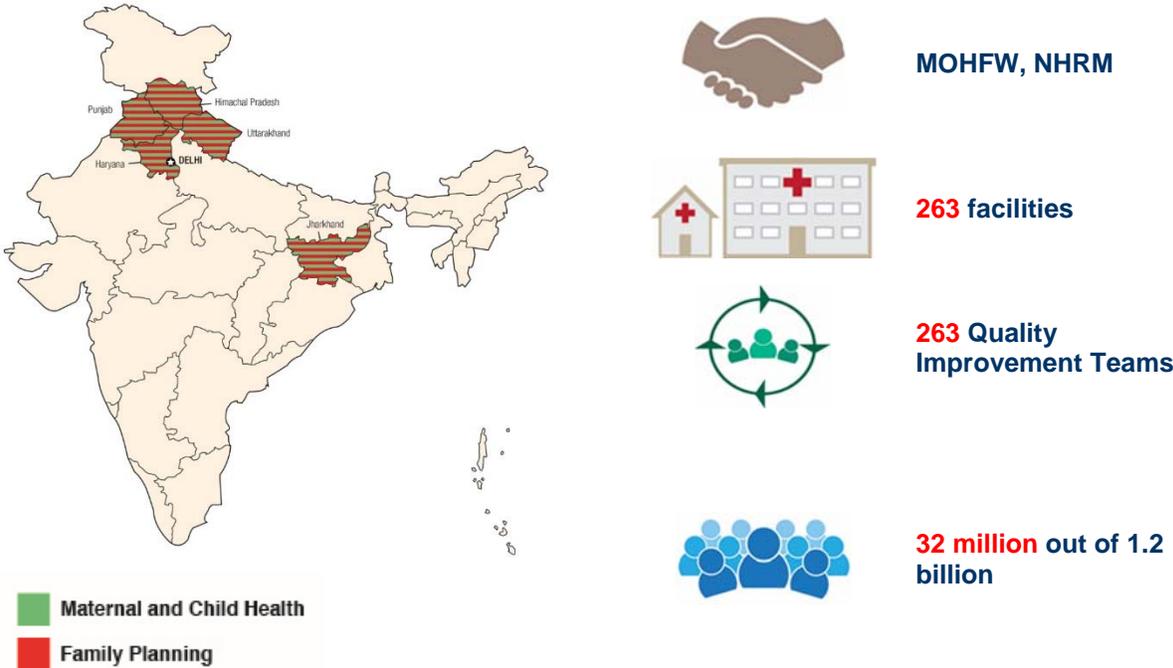
Abbreviations

ANC	Antenatal care
ANM	Auxiliary nurse midwife
ASHA	Accredited social health activists
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
AWW	Anganwadi workers
BP	Blood pressure
CCP	Johns Hopkins Center for Communication Programs
CHC	Community health center
DIC	District improvement coordinator
ENC	Essential newborn care
FOGSI	Federation of Obstetrics & Gynecological Societies of India
GOI	Government of India
Hb	Hemoglobin
HP	Himachal Pradesh
IAP	Indian Academy of Pediatrics
IUCD	Intrauterine contraceptive device
KM	Knowledge management
MOHFW	Ministry of Health and Family Welfare
NHRM	National Health Rural Mission
NHSRC	National Health System Resource Centre
NIHFW	National Institute of Health and Family Welfare
PHC	Primary health center
PIP	Program implementation plan
PPH	Post-partum hemorrhage
QI	Quality improvement
RMNCH+A	Reproductive, Maternal, Newborn, Child and Adolescent Health
UK	Uttarakhand
URC	University Research Co., LLC
USAID	United States Agency for International Development

1 Introduction

The USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project started working in India in September 2013. The technical focus of the project is the Reproductive Health, Maternal, Neonatal, Child, and Adolescent Health or “RMNCH+A” continuum. The project was tasked with working with six USAID-supported states and at least one block in each of the 27 USAID-supported districts to build improvement capability by enhancing the commitment and capability of leaders at the national, state and district levels to lead health care improvement. In addition, the project is working to develop the capacity to conduct improvement among health care workers and national, state, district, public and private facilities, and community levels along the continuum of reproductive health, maternal, neonatal, child, and adolescent health. Partners include the Government of India (GOI), Ministry of Health and Family Welfare (MOHFW), the National Rural Health Mission (NHRM), state and district governments, and key professional organizations including: National Health System Resource Center (NHSRC); Federation of Obstetrics & Gynecological Societies of India (FOGSI); and Indian Academy of Pediatrics (IAP).

Scale of USAID ASSIST’s Work in India



2 Program Overview

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Enhance improvement capability in the Indian health system through	<ul style="list-style-type: none"> Improve care along the R-MNCH+A continuum in priority USAID districts Develop the capacity to conduct improvement among health care 	6 USAID-supported states, all 30 of the USAID-supported districts, and one “block” in each of the selected districts: <ul style="list-style-type: none"> Delhi: 2 districts, 2 blocks 	x	

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
conducting improvements in the “RMNCH+A” continuum in public and private entities	<p>workers at community, facility, district, state and national levels</p> <ul style="list-style-type: none"> Enhance commitment and capability of leaders at the community, facility, district, state and national levels to lead health care improvement 	<ul style="list-style-type: none"> Himachal Pradesh (HP): 4 districts, 4 blocks Punjab: 5 districts, 5 blocks Uttarakhand: 3 districts, 3 blocks Jharkhand: 11 districts (staff placed in 6 districts) Haryana: 7 districts, 7 blocks <p>Total number of facilities: 400-500 QI teams: 263 Total population coverage: 32M</p>		

3 Key Activities, Accomplishments, and Results

Activity 1. Enhance improvement capability in the Indian health system

ACCOMPLISHMENTS

- Conducted work planning with government counterparts** (September 2014): ASSIST held several meetings with government counterparts. The Government of India asked ASSIST to help implement the RMNCH+A strategy. This strategy includes the priority 25 interventions chosen by the government that they are requesting all implementing partners to support (Figure 1).

Figure 1:5x5 matrix for RMNCH+A

5 X 5 matrix for RMNCH+A				
<i>Be a leader and ensure health of mothers and children</i>				
R	M	N	C	A
Reproductive Health <ul style="list-style-type: none"> Birth spacing methods, particularly PPIUCD Interval IUCD Doorstep delivery of contraceptives Safe abortion Sterilization services 	Maternal Health <ul style="list-style-type: none"> ANC Detect and manage high risk pregnancies Equip delivery points Review deaths Notify sub-centers with few deliveries, distribute misoprostol and incentivize ANMs for home deliveries 	Newborn Health <ul style="list-style-type: none"> EBF Home based PNC ENC and resuscitation Equip Special Newborn Care Units Community use of Gentamycin 	Child Health <ul style="list-style-type: none"> Complementary feeding, IFA Community diarrhoea management Management of pneumonia Full immunization Screening and managing birth defects, development delays, deficiencies and disease 	Adolescent Health <ul style="list-style-type: none"> Peer educators Delay age of marriage Strengthen ARSH clinics Weekly IFA Supplementation (WIFS) Promote menstrual hygiene
Health Systems <ul style="list-style-type: none"> Case load based deployment of HR at all levels Ambulances, drugs, diagnostics, reproductive health commodities Behavior change communication Supportive supervision and use of scorecards based on HMIS Public grievances redressal mechanism 		Cross cutting <ul style="list-style-type: none"> Equip nurses to provide specialized and quality care Address social determinants of health through convergence Introduce difficult area and performance based incentives Focus on un-served and underserved villages, urban slums and blocks Bring down out of pocket expenses 		

- **Supported district and state officials in the development of District Action Plans and state Program Implementation Plans (PIP)** in all six districts and states in December 2013 and January 2014. Joint meetings were held with district program managers and other state consultants for the development of action plans and state PIPs.
- **Developed priorities and indicators and established quality improvement (QI) teams in six states:** After reviewing statistics, evidence, and government priorities and consultation with experts, ASSIST India prioritized the following four areas to focus on in order to reduce anemia, post-partum hemorrhage (PPH), and newborn deaths:
 - Antenatal care (ANC)
 - Delivery care, including active management of the third stage of labor (AMTSL)
 - Immediate postpartum care
 - Essential newborn care
- **ASSIST developed a list of indicators for the baseline assessment as well as a database and data collection tools.** ASSIST staff were trained on QI and use of the database. ASSIST then selected one block in each district in consultation with district officials. Criteria for selection included choosing blocks that were delivering a lot of babies, not too far from the district headquarters, and had RMNCH+A performance indicators that were close to the median for that district. Each block has a community health center (CHC), three or four primary health centers (PHCs), and several sub-centers. Beginning in December 2013 ASSIST helped establish QI teams in the CHC, PHCs, and sub-centers that were delivering babies in each block. ASSIST also supported the development of QI teams in the district hospitals (DHs) and sub-district hospitals (Sub DHs). Each team selected a priority topic related to one of the four focus areas to start with. By the end of FY14, ASSIST was working with 263 teams (Table 1). These improvement teams are addressing aims related to the topic areas shown in Table 2.

Table 1: Members of improvement teams by state (Oct 2014)

States	DH	Sub DH	CHC	PHC	Sub-centers	Total
Jharkhand	6		6	13	60	85
Haryana	7	5	7	9	5	33
Punjab	5	9	6	5	28	53
Himachal Pradesh (HP)	4	3	6	7	36	18
Uttarakhand (UK)	3	2	3	5	8	21
Delhi	5		10			15
Total	30	19	38	39	137	263

Table 2: Number of ASSIST-supported facilities working on specific aims, by state (Oct 2014)

State	Number of ASSIST-supported facilities working on specific aims										
	ANC	Partogram	AMTSL	ENBC	Post Natal Care	PP IUCD	Neonatal Resus.	PPH Mgmt	Pregnancy-induced hypertension (PIH)	Anemia Mgmt	Others
Delhi	8		14	11	4	2	9	5	7	10	0
Haryana	2	4	27	27	19					4	1
Punjab	36	11	25	39	12	6				11	
Jharkhand	3	21	25	25	22	5		5	12	2	
UK	18	7	16	14	13						
HP	18		11	11	8		8	5	7		
Total	85	43	118	127	78	13	17	15	26	27	1

- By October 2014, ASSIST was working in most areas (shaded in blue) across the RMNCH+A continuum prioritized by the Government of India (Table 3).

Table 3: Topic areas currently being addressed by facility teams supported by ASSIST (Oct 2014)

Reproductive health	Maternal health	Newborn health	Child health	Adolescent health
Focus on spacing methods, particularly postpartum intrauterine contraceptive devices (IUCD)	Use maternal and child tracking to ensure early registration and full ANC	Early initiation and exclusive breast feeding	Complementary feeding, iron and folic acid, nutrition	Address teenage pregnancy and contraceptive use
Interval IUCD	Detect high risk pregnancy, ensure management	Home based newborn care through accredited social health activists	Diarrhea management at community	Community based services through peer educators
Home delivery of contraceptives and spacing	Equip delivery pts for equitable access to emergency obstetric care	ENC and resuscitation	Pneumonia management	Strengthen adolescent reproductive and sexual health clinics
Access to pregnancy kits and strengthen abortion care	Review maternal, infant and child deaths	Sick newborn care unit with trained staff and infrastructure	Immunization	Roll out national Iron plus initiative
Maintain quality sterilization services	Distribute misoprostol and incentivize ANM for home deliveries	Community level use of gentamicin	Screening for disability, birth defects, developmental delays, other diseases	Promote menstrual hygiene

RESULTS

Improvement in Key Indicators

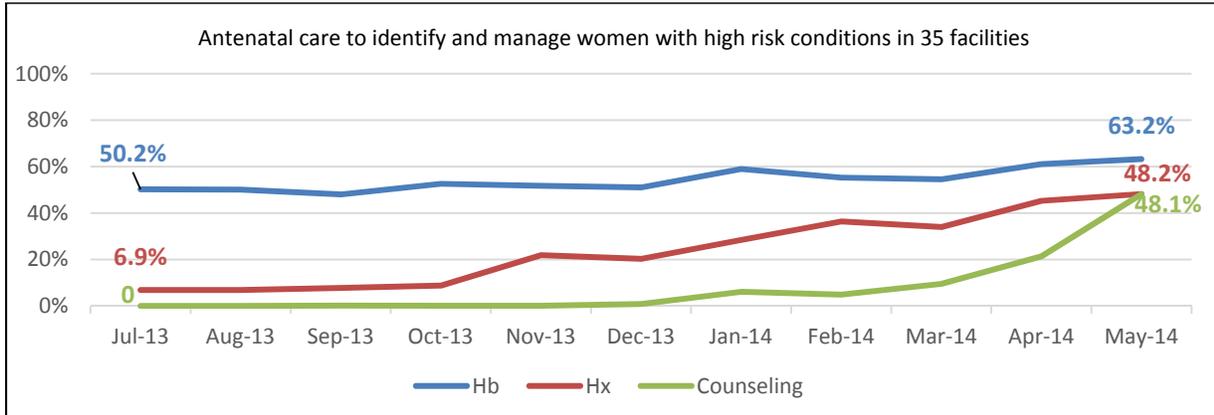
Indicators	Baseline (January 2014)	Last value (July 2014)	Magnitude of improvement
Proportion of newborns who were assisted for breathing out of total newborns reviewed*	17% (58 sites)	7% (51 sites)	-10
Proportion of newborns made dry and provided warmth immediately after birth out of total newborns observed	47% (56 sites)	98% (51 sites)	51
Proportion of newborns who were provided sterile cutting and clamping of cord out of total newborns reviewed	47% (56 sites)	98% (50 sites)	51
Proportion of newborns breastfed within one hour of birth	87% (69 sites)	94% (68 sites)	7
Proportion of newborns given injection of vitamin K at birth	55% (78 sites)	98% (102 sites)	43
Proportion of vaginal deliveries for which uterotonic was administered within one minute of birth of baby	16% (96 sites)	98% (103 sites)	82
Average number of times vitals (both blood pressure and pulse) checked and recorded within first 6 hours post-partum	0.8 (70 sites)	2.1 (83 sites)	1.3
Proportion of ANC visits during which hemoglobin of pregnant woman was checked and documented	59% (54 sites)	84% (44 sites)	35

*Note: There were data quality issues for the indicator “proportion assisted for breathing” at the start of the project. Many sites reported proportion assessed, so we don’t have a reliable baseline.

Antenatal care

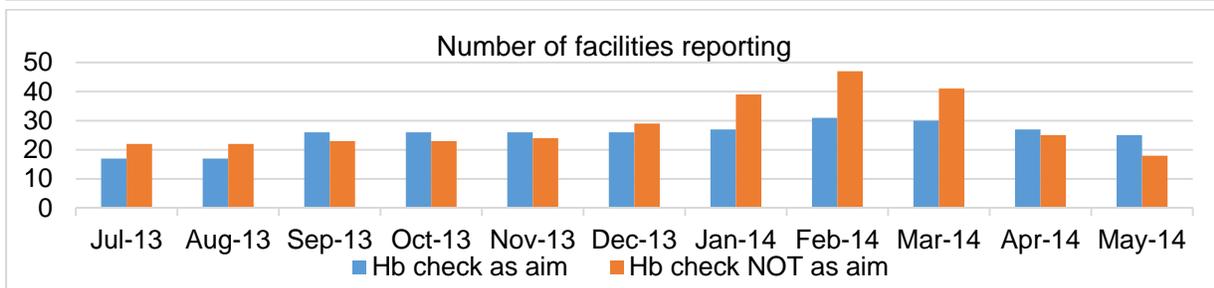
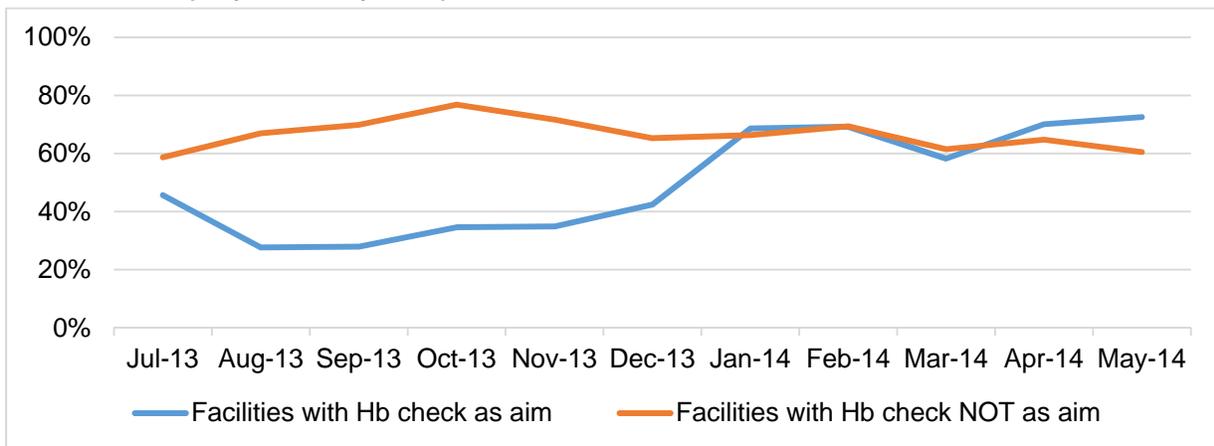
- Eighty-five sites have been working to improve antenatal care. Figure 2 shows the aggregated time series data from the 63 facilities that have more than one month of data since starting to work to improve care. The figure shows a dramatic increase in the percentage of women who have an accurate history taken and who are counseled on danger signs.

Figure 2: Percentage of women who received antenatal care to manage high-risk conditions, 35 facilities (July 2013- May 2014)



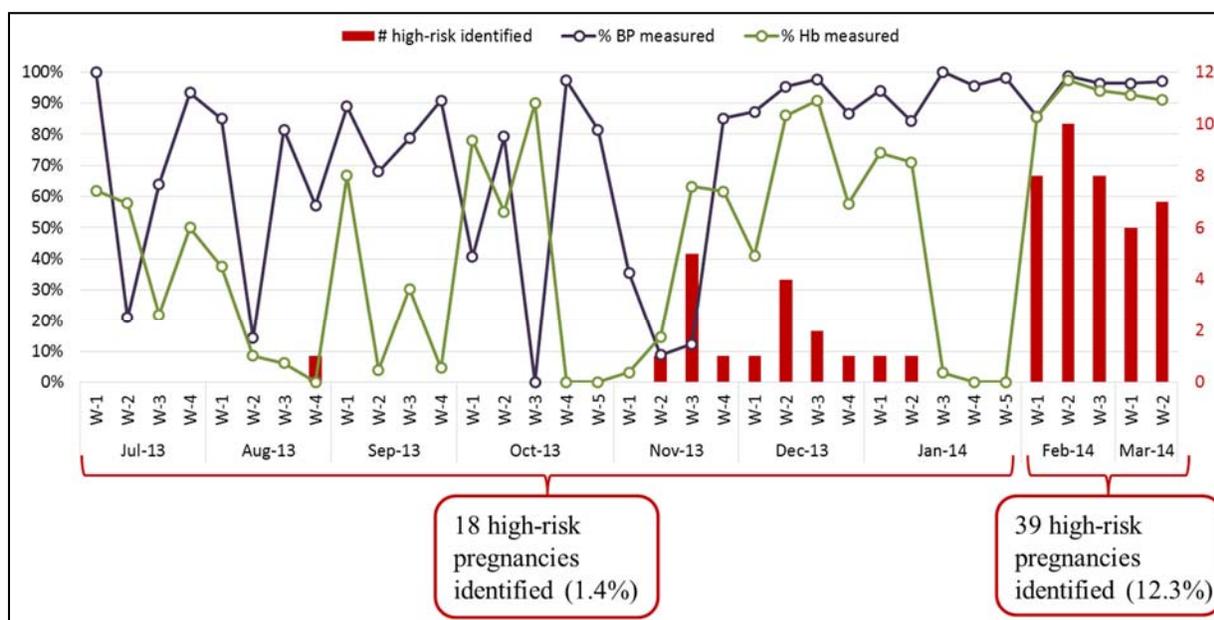
ASSIST looked at how performance compares between facilities with a specific improvement aim vs. those without that aim. This comparison was done to evaluate whether the change in performance was due to the fact that these teams were being observed. The period of performance was from July 2013 to May 2014. Results (Figure 3) show an increase in performance in facilities that were actively trying to improve hemoglobin measurement from July 2013 to May 2014 but not in sites that were not working to improve this. Both types of facilities were being asked to report on these data.

Figure 3: Comparison of results in facilities with and without the goal of improving hemoglobin measurement (July 2013-May 2014)



- More reliable antenatal care in Mandi Zonal Hospital, Himachal Pradesh:** ASSIST started working with Mandi Zonal Hospital in December 2013. The ASSIST district improvement coordinator (DIC) worked with health care providers in the hospital's ANC clinic to form a QI team. After looking at their data, the team realized that their clinic was not doing a good job of identifying high-risk clients. When they analyzed their current system of providing care, they found that staff were not clear about what services to provide to patients or who should do what. Because of this, the clinic was chaotic and not reliably providing standard care. For example, before the improvement team started working, the percentage of women receiving a hemoglobin (Hb) test varied from 0 to 91% depending on the day. Most weeks, no high-risk women were identified (Figure 4).

Figure 4: Number of high-risk pregnancies detected and percentage of ANC's during which BP and Hb were measured in Mandi Zonal Hospital, Himachel Pradesh (July 2013-March 2014)



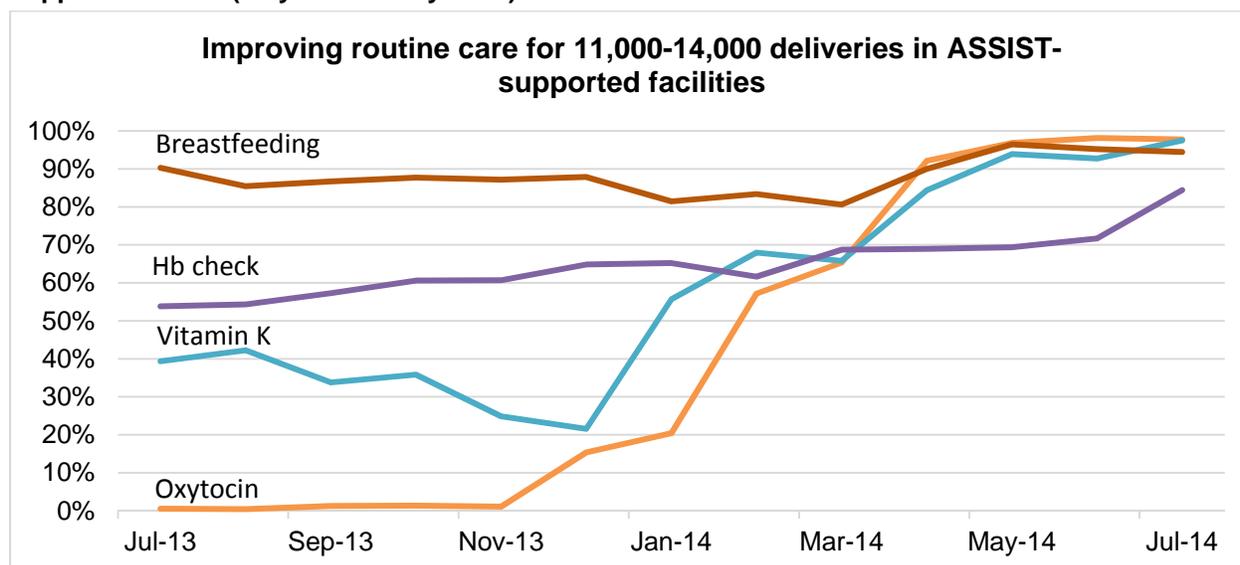
Based on their analysis of the problem, the Mandi QI team implemented four main interventions:

- On the job training about essential elements of ANC:** The DIC reviewed with the staff the government guidelines for ANC and helped make sure that all essential elements were included in their new system of care.
- Defining roles:** After clarifying the elements of care that needed to be provided, the team assigned roles to staff describing who should perform which tasks and also clarified how patients should move between stations. The team started using the new system in the first week of February 2014.
- Using standard government documentation tools:** The DIC shared with the team the Government of India ANC register which they had not previously been using. The team started using this register in December 2013.
- Counsel clients to return from lab:** A major issue in the clinic was that patients had their hemoglobin and urine checked in the laboratory but did not bring the results back to the ANC clinic so laboratory tests were of no clinical use. To address this, the ANC recording staff started asking the women to return to the clinic with their lab test reports so that any additional actions could be taken.

Routine care

- Sites in the high-priority districts supported by ASSIST in the six states had between 11,000 and 14,000 deliveries every month during July-September 2014. Over the year, these sites have seen a progressive increase in hemoglobin measurement of antenatal women, administration of oxytocin within a minute of childbirth, administration of vitamin K to newborns, and early initiation of breastfeeding in newborns (Figure 5).

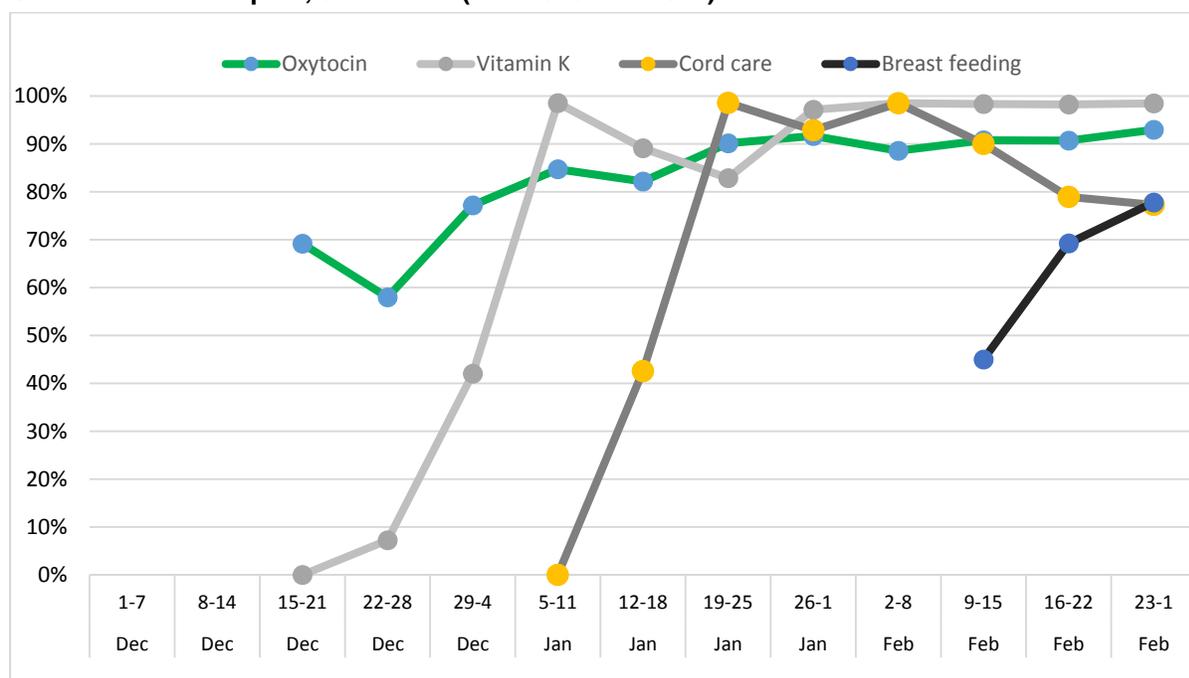
Figure 5: Improvement in routine care for 11,000-14,000 deliveries per month, six ASSIST-supported states (July 2013 – July 2014)



Essential newborn care

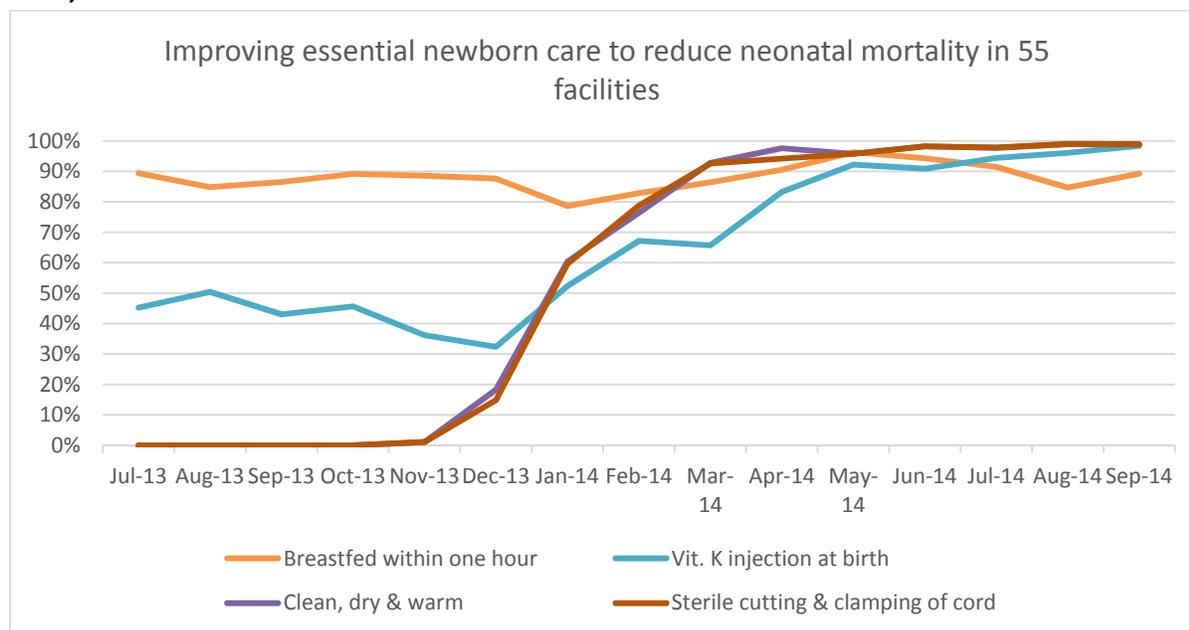
- Improvement work in Godda District Hospital, Jharkand:** Godda District Hospital is a 46-bed hospital serving a population of 1.3 million. It is staffed by medical officers, 10 staff nurses, and 11 auxiliary nurse midwives. The labor and delivery room is staffed by eight staff nurses and delivers approximately 12 women per day. The hospital’s initial focus in the RMNCH+A initiative was to reduce PPH by ensuring that all women receive oxytocin immediately after they deliver their babies and to ensure that all babies receive essential newborn care (ENC). Within three months, the hospital saw a substantial decrease in PPH and an increase in the proportion of pregnant women receiving oxytocin and in the proportion of neonates receiving the elements of ENC (Figure 6).

Figure 6: Performance on oxytocin administration and elements of essential newborn care in Godda District Hospital, Jharkhand (Dec 2013-Feb 2014)



Fifty-five facilities have been working to improve essential newborn care. They are seeing improvement in the proportion of babies receiving cord care and Vitamin K and who are warmed and dried following delivery (Figure 7).

Figure 7: Percentage of babies receiving essential newborn care, 55 facilities (July 2013-April 2014)

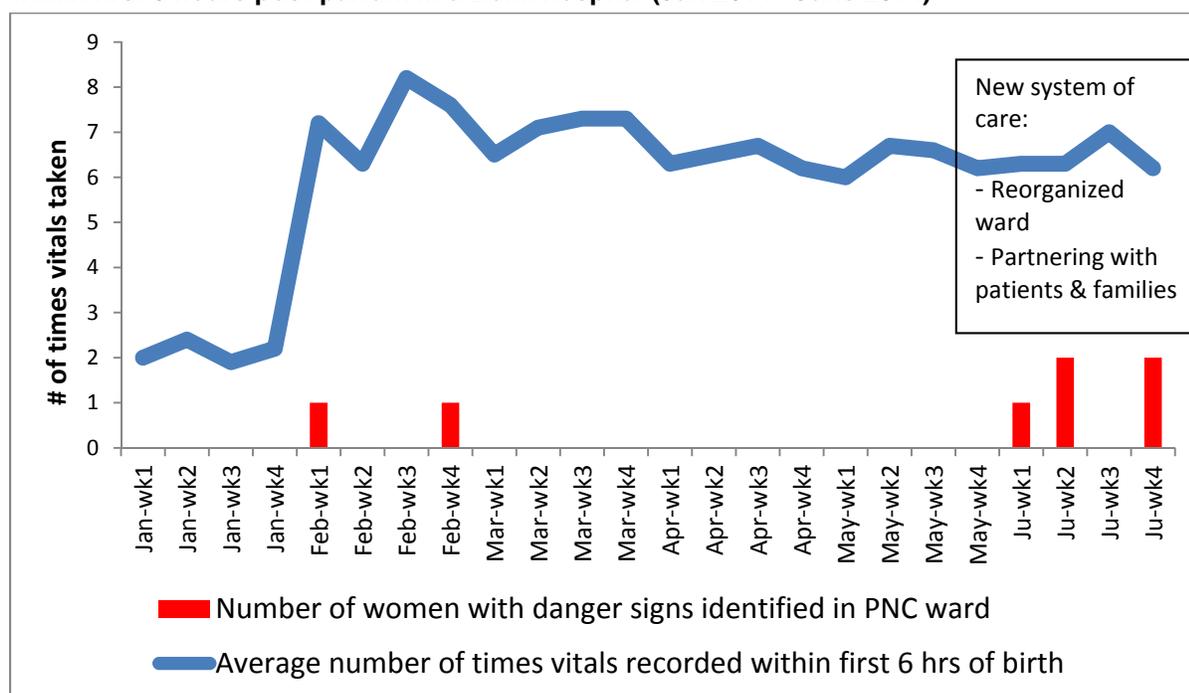


Postpartum care

- Bhagwan Mahavir Hospital** is a secondary care, 250-bed hospital providing care to a largely low-income urban population in Delhi. In 2013, the hospital delivered 5,854 babies and had five maternal deaths in the post-partum period, including two in December 2013. Because of this, when ASSIST started working with them, they wanted to develop a better system for monitoring women in the post-partum period. After collecting baseline data, they found that women were only being assessed twice in the first six hours after delivery. They decided to increase the number of assessments. The medical superintendent sent a letter to the labor and delivery room stating that women had to have six assessments in the first six hours. The labor room staff interpreted the letter to mean that women had to stay in the labor room for six hours. This led to huge overcrowding in the labor room. When the QI team met a week later they clarified that the women could be moved out of the labor room and the monitoring could happen in the post-partum care ward. This was clarified with all staff. These changes meant that women had more frequent visits from the nurses and more frequent monitoring. Despite this increase in monitoring, in the four months after the change, only 2 of 1,513 (0.13%) women were identified as having complications after delivery, and these women were identified at a very late stage (one was seizing and one had bled copiously). The team decided that they would focus on making the monitoring system more effective at picking up women with complications early. They felt that the main barrier to identifying women early was the work load, so they decided to try two changes to make the monitoring more efficient so that they would have more time to do careful assessment of the women. The changes were: 1) having all women spend the first six hours after delivery in a dedicated room (to save time on walking around the ward, finding equipment, etc.) and 2) teaching family members about what danger signs to look for and when to contact a nurse. They tried this new system for two days and learned that these changes made it easier to do the work and that they seemed likely to lead to improved care.

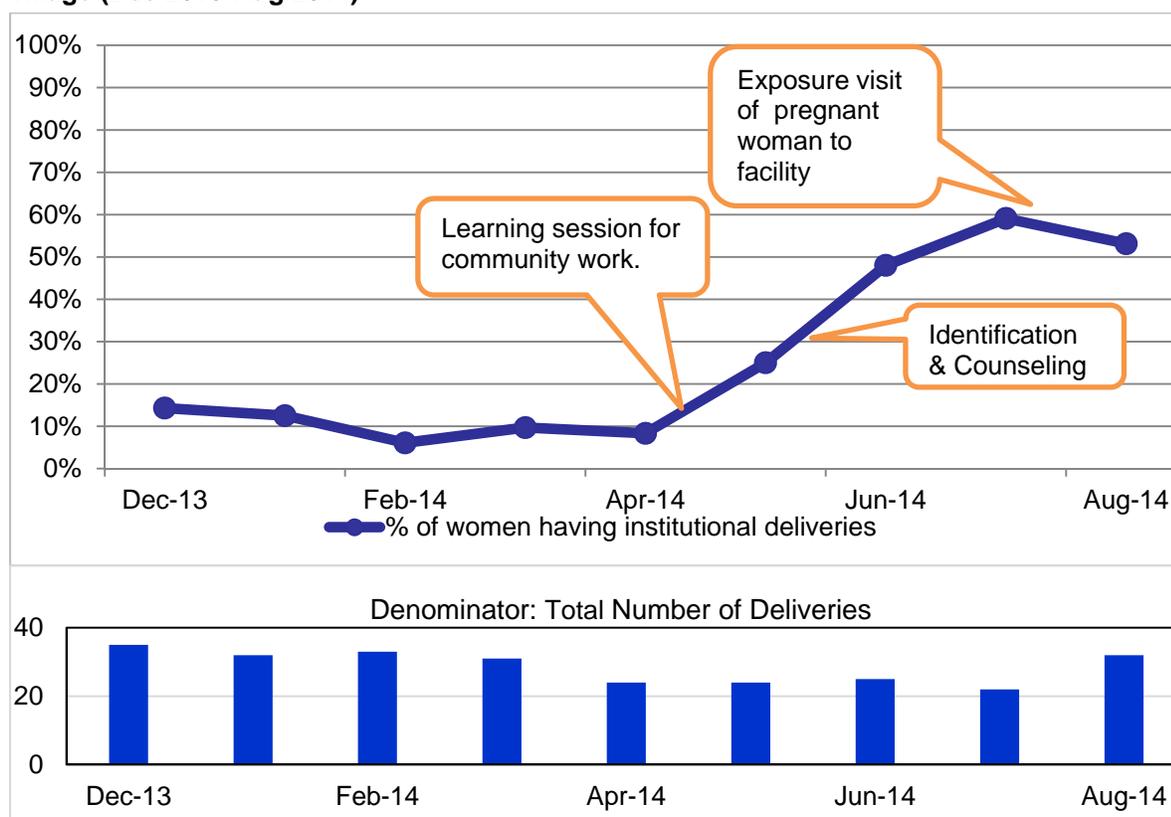
This new system led to five women out of 318 (1.6%) being identified with complications in the first four weeks of the change. As seen in Figure 8, these changes led to a reliable system of monitoring vital signs six times in the first six hours post-partum.

Figure 8: Average number of times vitals (both blood pressure and pulse) checked and recorded within first 6 hours post-partum in a Delhi hospital (Jan 2014– June 2014)



- **Community-level improvement:** Since July 2014, the community improvement program is operational in 9 districts supported by ASSIST. The following is an example of the progress made in one of the districts located about 90 km away from Delhi.
 - The village of Salaheri in Haryana State has a population of 6,973, with accredited social health activists (ASHAs) supporting facility-based auxiliary nurse midwives (ANMs). The expected number of deliveries per month in this particular village is about 30. A village QI team consisting of ANMs, ASHAs, and community social workers [known as anganwadi workers (AWW)] was formed. The aim this team chose was to increase facility deliveries from 10% to 60% in three months. The QI team introduced specific changes to improve institutional delivery in this specific village, including: 1) Identification of pregnant women with expected delivery in the month and their group counseling by ASHAs and AWWs, followed by multiple visits by the latter to the individual pregnant women; 2) the pregnant women who seemed reluctant to ASHAs and AWWs were visited by ANMs; and 3) providing an exposure visit to the labor room and health facility for identified pregnant women.
 - After the changes were introduced, the proportion of women delivering in health facilities increased from only 14% to more than 50% within three months (see Figure 9). The QI team in this community decided to increase institutional delivery to 100% in the next three months.

Figure 9: Percentage of women who had institutional deliveries out of total deliveries in Salaheri village (Dec 2013-Aug 2014)



SPREAD OF IMPROVEMENT

- Scaled up to 38 new facilities in Chamba, Himachal:** ASSIST trained 50 staff from 38 health facilities in Chamba District, Himachal Pradesh to set up and manage improvement projects at their facilities. This was done at the request of the Chief Medical Officer who had been impressed by the results he was seeing at ASSIST-supported sites and who asked for support for additional blocks to start using quality improvement approaches. These 38 facilities will be supported by district staff (nine health supervisors and two block medical officers in charge) who have previously been trained by ASSIST. The district will include reports from these quality improvement teams at all monthly district meetings and has committed to funding quarterly meetings for the teams to come together to learn from each other using peer-to-peer support methods that they have learned from ASSIST. Lohardaga and Sareikela districts in Jharkhand have also asked for support to scale up quality improvement activities. We are encouraged by these early signs of government ownership and sustainability and will continue to provide assistance as the district builds its skills in using improvement methods to address pressing health problems on the RMNCH+A continuum.

4 Sustainability and Institutionalization

Despite only working at the facility level for less than a year, the state and district governments that ASSIST is supporting are starting to become more interested in using improvement science to reach their health goals. Signs of institutionalization include: districts requesting support to design strategies to scale up the use of improvement methods in existing systems, and states requesting budget support from the national government for quality assurance or quality improvement work. ASSIST will be closing in August 2015. There are a number of avenues through which the Indian health system can continue to use QI approaches to reduce mortality and morbidity:

1. Some districts have already started using their own resources to spread improvement work to new facilities. ASSIST is providing technical assistance as they build their capacities to do this

independently. Whether they can learn to work independently with less than a year of external technical assistance is not yet known.

2. ASSIST is planning to work with IAP and the National Neonatology Forum to improve management of asphyxiated neonates. This is another potential avenue to continue QI activities after ASSIST closes in both the private and public sectors.
3. The central government is extremely interested in QI and is putting additional resources into learning more about QI and to developing plans to support QI. If supported correctly after ASSIST closes, this would be the best option to improve health in India.

5 Knowledge Management Products and Activities

Technical assistance was provided by Bethesda-based staff in December 2013 in India where ASSIST India staff identified specific knowledge and communication products to be developed for RMNCH+A strategy. Knowledge nuggets were identified to be the most appropriate knowledge product to harness learning at facilities. Bethesda-based staff provided a training on knowledge management (KM) approaches to six State Improvement Coordinators, two District Improvement Coordinators, and Delhi-based technical staff. The training covered key KM competencies, a demonstration of the ASSIST India Web Portal, and interactive activities such as storytelling.

- ASSIST staff from Johns Hopkins Center for Communication Programs (CCP) developed an internal ASSIST India Web Portal that will function as a repository of knowledge products such as knowledge nuggets and GOI guidelines. The portal was on the toolkit platform in the K4Health website but will be moved to the global ASSIST knowledge portal by December 2014.
- Three case studies were published in FY14:
 - The first 3 months experience in improving labour and delivery care at Godda District Hospital, Jharkhand, India: <https://usaidassist.org/resources/first-3-months-experience-improving-labour-and-delivery-care-godda-district-hospital>
 - Improving the process of antenatal care to increase detection of women with high-risk conditions in Zonal Hospital of Mandi, Himachal Pradesh, India: <https://usaidassist.org/resources/improving-process-antenatal-care-increase-detection-women-high-risk-conditions-zonal>
 - Improving antenatal services with limited human resources in selected facilities of Kinnaur District, Himachal Pradesh, India: <https://usaidassist.org/resources/improving-antenatal-services-limited-human-resources-selected-facilities-kinnaur-district>

6 Research and Evaluation Activities

- **ASHA community study:** A study of ASHAs, who are community health workers, was completed in two districts: Mewat in Haryana and Gurdaspur in Punjab. Preliminary findings were presented at the bimonthly meeting in August 2014. The data analysis is now complete, and a summary of the final findings is in preparation for presentation to USAID India. At least two publications will be written up now, with the possibility of further publications at a later stage. The findings are expected to inform the development of a community QI plan in which barriers faced by ASHAs could be addressed in a sensitive and culturally appropriate way. Furthermore, the findings will also contribute to the development of gender integration in community QI work. The next bimonthly meeting will have a separate session on the study findings and a discussion of how gender issues can be addressed.
- Initiated a study to validate improvement teams' self-reported data. Data collection is planned for the beginning of FY15. Training of data collectors (to observe deliveries) is underway.

7 Gender Integration Activities

As a part of the ASHA community study, the team examined the effects that family, the community, and gender norms have on the work environment for ASHAs. The qualitative study analyzed ways in which these external factors affect ASHAs' ability to provide care. The research study is expected to provide important information that the ASSIST team can use to work more effectively with ASHAs. In addition to targeting women, community health workers also engaged and informed male family members about the importance of ANC and post-partum family planning due to their decision-making power within families. In

certain cases, ASHAs have taken their husbands with them to homes to provide information and counselling on family planning and especially male sterilization, when relevant. In certain districts, the husband would lead the counselling specifically on sterilization and would sometimes escort male patients to the facility for sterilization.

8 Directions for FY15

- Continue to expand improvement work to small clinics and communities
- Support facilities in their efforts to improve care for cases with complications
- Complete study examining factors affecting the ability of community health workers to carry out their jobs and using its findings to improve ASHAs' performance
- Produce case studies of single team improvement work as well as larger scale improvement design work
- Explore opportunities for collaboration with professional associations on neonatal resuscitation and complications of pregnancy

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