

MIDTERM EVALUATION SUMMARY



ReMiND Project

Cover photo by Elin Murless/CRS



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Acronyms

ANC	Antenatal care
ASHA	Accredited Social Health Activist
BHEO	Block Health Education Officer
BKT	Bakshi Ka Talab
CRS	Catholic Relief Services
DALY	Disability-adjusted life year
GOI	Government of India
IFA	Iron-folic acid
KPC	Knowledge, practice and coverage
MNCH	Maternal, newborn and child health
MTE	Midterm evaluation
RDW	Recently delivered women
ReMIND	Reducing Maternal and Newborn Deaths
UP	Uttar Pradesh
UP-NHM	UP National Health Mission
SF	Sector Facilitator
SO	Strategic objective
TT	Tetanus Toxoid
VHIR	Village Health Information Register

Key lessons learned

- One of the major successes of ReMiND has been increasing ASHAs' coverage of pregnant women in their community. The project reduced the number of low-coverage ASHAs to less than 20 percent of the total, down from more than 60 percent at baseline.
- Only 44 percent of women received an ASHA visit with a counseling component prior to the intervention, but 72 percent received a counseling visit from their ASHA at the time of the midterm evaluation survey.
- Pride, honor and community recognition that an ASHA gets in the community is a source of motivation for her.
- Beneficiaries (pregnant women, recently delivered mothers) considered counselling messages from ASHAs about the importance of institutional deliveries alongside contrary messages from their social networks.
- While knowledge of danger signs increased, care seeking for complications did not. Information about danger signs may have been difficult for women to act upon.



Photo by Elin Murless/CRS

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ReMiND is a mobile-based job aid for India's frontline health workers—called the Accredited Social Health Activist (ASHAs)—and their supervisors.
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Introduction

Using mobile phone-based health technology (mHealth), the Reducing Maternal and Newborn Deaths Project (ReMiND) aims to increase the adoption of key maternal newborn and child health practices by improving the presentation and content of health information provided by ASHAs, as well as strengthening support and supervision structures for the ASHA through the ASHA supervisor called the ASHA Sangini.

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ReMiND aims to increase the adoption of key maternal newborn and child health practices.
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The project objectives are to increase the following:

1. Coverage of the ASHA (i.e., increase the number of pregnant women who are visited at least once by an ASHA).
2. Frequency and quality of counseling by ASHAs to their pregnant clients.
3. Client knowledge of danger signs in pregnancy and postpartum.
4. Adoption of key maternal, newborn and child health (MNCH) and nutrition practices of clients during pregnancy and postpartum (e.g. number of antenatal care visits, Tetanus Toxoid injections, care seeking for danger signs, and appropriate breastfeeding).

The ReMiND project completed a baseline study in January 2013 that included a qualitative study and a quantitative knowledge, practice and coverage (KPC) survey covering 1,100 households. The KPC established baseline measures for the project's strategic objective and targeted outcome-level indicators. The midterm evaluation in August 2014 employed the same methodology with 2,200 households.

Background

Uttar Pradesh contains a fifth of India's population, and lags far behind national averages in maternal, newborn and child health, threatening achievement of national and global goals. Kaushambi district, one of UP's 75 districts, exhibits some of the worst health statistics, with neonatal, maternal and child mortalities far greater than the national averages (at 84%, 92% and 103% higher).¹

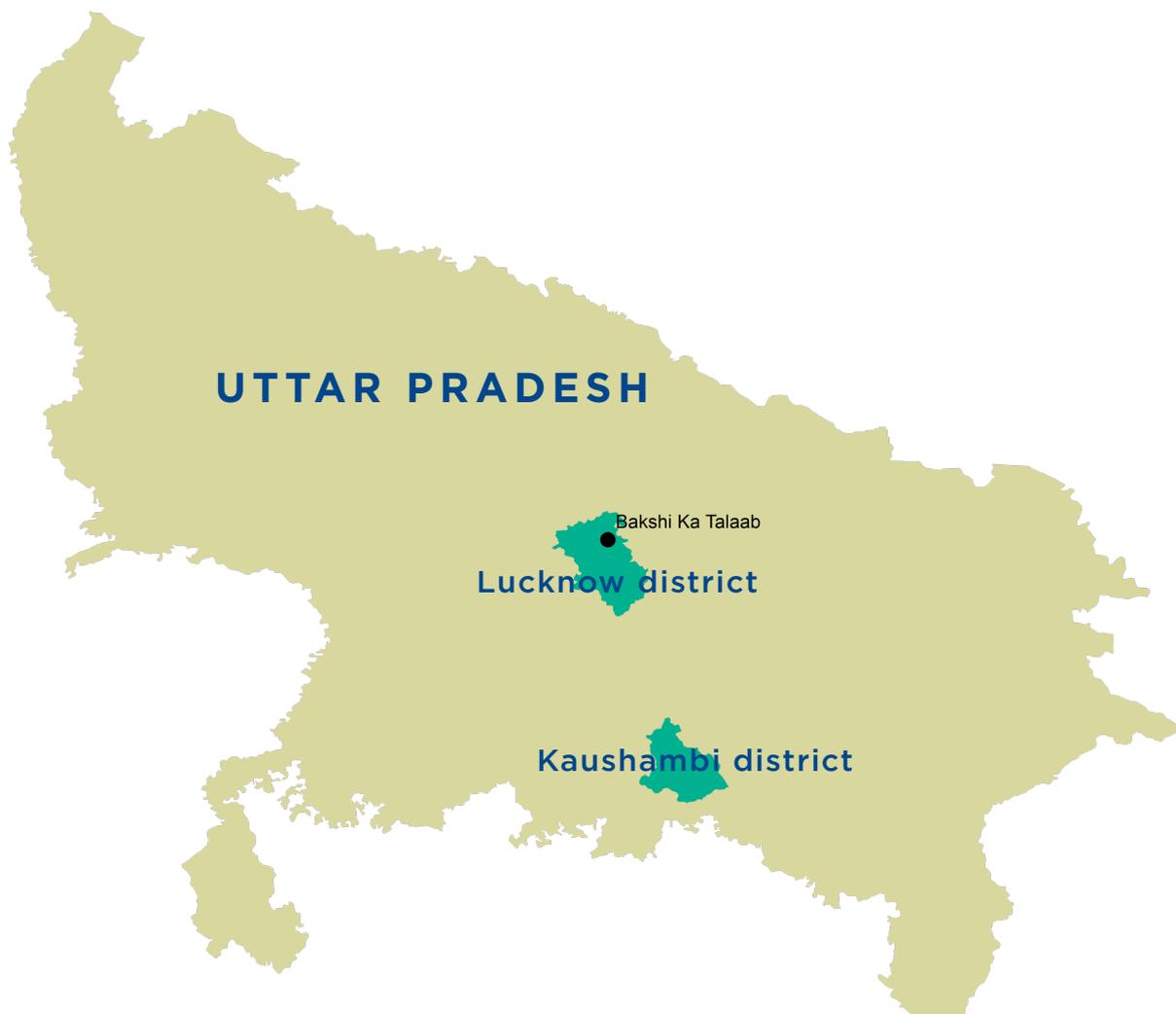
In 2006, the Government of India formed a network of community health workers known as Accredited Social Health Activists (ASHAs) in an attempt to promote improved health practices in rural communities. ASHAs act as the critical cornerstone between rural households and the health system, and are the main source of essential health information to families. A 2011 evaluation by the government highlighted several challenges to ASHAs provision of effective community health services, due to limited training and job aids, weak supervision structures, and low literacy among ASHAs.²

1. State of the World's Children 2012; 2010/2011 Annual Health Survey data
2. Evaluation of ASHA Program 2010-11, National Rural Health Mission. India

Uttar Pradesh lags far behind national averages in maternal, newborn and child health.



Maps by DK Siva Kumar



The ReMiND solution

In April 2011, Catholic Relief Services together with private sector technology leader Dimagi and local partner Vatsalya partnered to form the Reducing Maternal and Newborn Deaths (ReMiND) Project.

The government's ASHAs in project areas are now supported through basic mobile phones (Nokia C2-01) operating Dimagi's open-source CommCare software, which equips ASHAs with multimedia job aids that can be used to support their outreach to pregnant and recently delivered women. ASHAs were also supported by Sector Facilitators – project staff who accompanied the ASHAs on home visits, helped them with the phone and provided ongoing supportive supervision. SFs were precursors to the Sangini cadre of supervisors that the government put into place later. Once the Sangini cadre was introduced, the SFs were phased out. All real-time data is transmitted from the applications to CommCareHQ, Dimagi's cloud-based server, where project supervisors and government health professionals can monitor and support ASHA activities, and produce reports using CommCare's health data.

ReMiND has a comprehensive monitoring and evaluation system. The project team compiles monthly and quarterly reports for indicators to share with the team, health managers, government counterparts and partners. These data guide focused project management and timely allocation of resources towards low-performing program areas. The results framework was revised in December 2013 to reflect the project's evolving support to Sanginis and to explicitly include sustainability and scaling-up as cross-cutting themes in ReMiND.

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Methodology

The midterm evaluation included both quantitative and qualitative components, using a non-experimental pre- and post-study design. The quantitative component used two rounds of knowledge, practice and coverage surveys, with data collected using Dimagi's CommCare platform on tablets. Data was analyzed using Stata 13.

The qualitative data collection consisted of key informant interviews and focus group discussions. Full ethical permission was obtained, and informed consent was collected from each participant. Interviews were conducted in Hindi and recorded by a notetaker. Data were analyzed according to key themes.

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The midterm evaluation included both quantitative and qualitative components, using a non-experimental pre- and post-study design.
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ASHAs act as the critical cornerstone between rural households and the health system. *Photo by Amy Ellis/CRS*

Summary of findings

The greatest successes of the project have been in increasing the linkages between women and the health system. There were significant increases in the percentage of women being visited by ASHAs and receiving counseling from them. This improved antenatal care access, but did not translate into notable improvement in other areas of care seeking, such as institutional delivery.

Table 1: Progress on key program coverage indicators

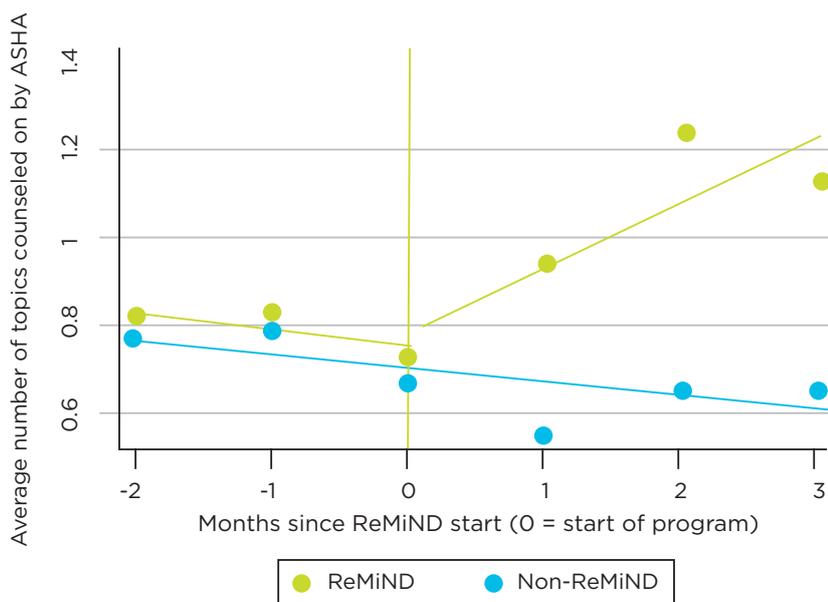
	Baseline	Midline	Difference
Percent of women ever visited by an ASHA	61% [0.58,0.64]	76% [0.73,0.78]	+15% [<.001]***
Percent of women receiving counseling from their ASHA	44% [0.41,0.47]	72% [0.69,0.74]	+28% [<.001]***

95% confidence intervals listed below the points estimates, with p-values listed under the differences

ASHA COVERAGE

As a result of ReMiND, ASHAs carried out far more visits with pregnant women, both due to support from the project and increased confidence derived from the mobile phone job aid. Only 44 percent of women received an **ASHA visit with a counseling component** prior to the intervention, but 72 percent received a counseling visit from their ASHA at the time of the midterm survey. Most of the improvement came from an increase in counseling on nutrition and rest during pregnancy, for which there was a module in CommCare.

Figure 1: Average number of topics counselled on by ASHAs



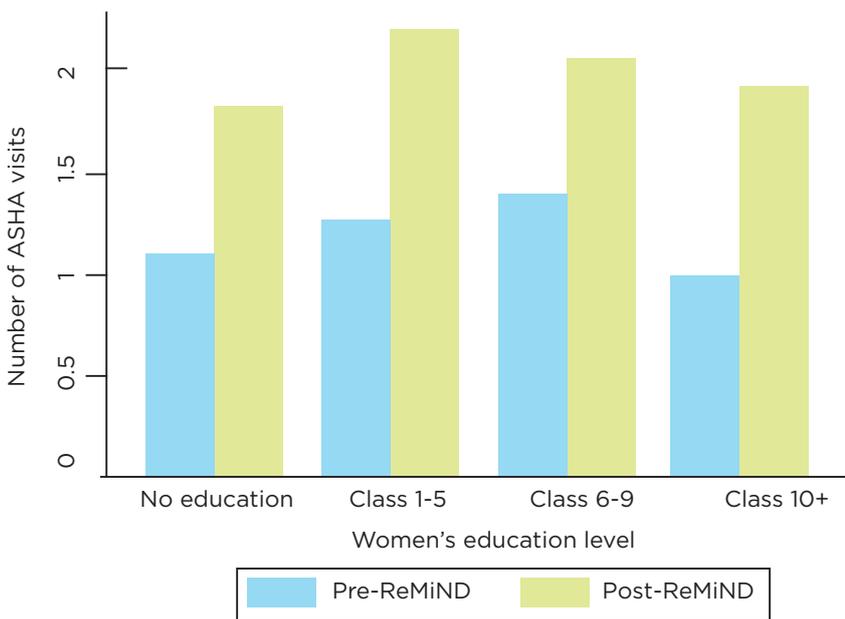
Within 3 months of implementation, 60 percent of recently delivered women reported having been visited by an ASHA using CommCare. Such rapid adoption suggests that the system is relatively easy to use by the ASHAs.

EQUITY EFFECTS

ReMiND was particularly successful at reducing the number of low-coverage ASHAs: the number of ASHAs who counseled less than 40 percent of the pregnant women in their village dropped from 61 percent to 19 percent. This in turn led to a large improvement in the number of antenatal care visits that women received, especially among less-educated households.

At baseline, less-educated women received slightly fewer visits than those with a medium level of education, but not much lower. In fact, wealthier households also received fewer visits from ASHAs, likely due to lack of demand from those who could afford more private health services. ReMiND increased ASHA visits across all levels of women’s education.

Figure 2: Number of ASHA visits, by women’s education level



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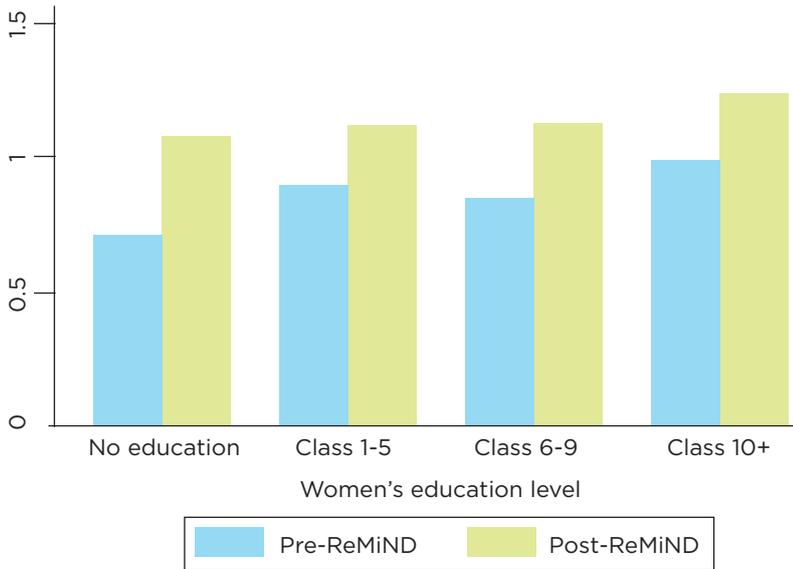
DANGER SIGNS

As a result of the project, women received significantly more counseling on nutrition and pregnancy danger signs, and were able to name nearly twice as many pregnancy danger signs. Recall of nutrition messages increased from 17.8% to 55% of women, while recall of counseling danger signs increased from 3.8 % to 14% of women. Most of this increase came among less-educated women, such that after ReMiND, they named nearly as many danger signs as more-educated women. However, the absolute number of danger signs that they could name was still low (1.23) to expect it to translate into health outcomes. One of the main areas of interest was whether women were more likely to seek care upon experiencing danger signs. Results were inconsistent, with improvement in care seeking for some danger signs but not others.

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RECALL OF NUTRITION MESSAGES SHOWED A HUGE INCREASE, FROM 17.8 PERCENT TO

55%

Figure 3. Number of delivery danger signs known, by women's education level



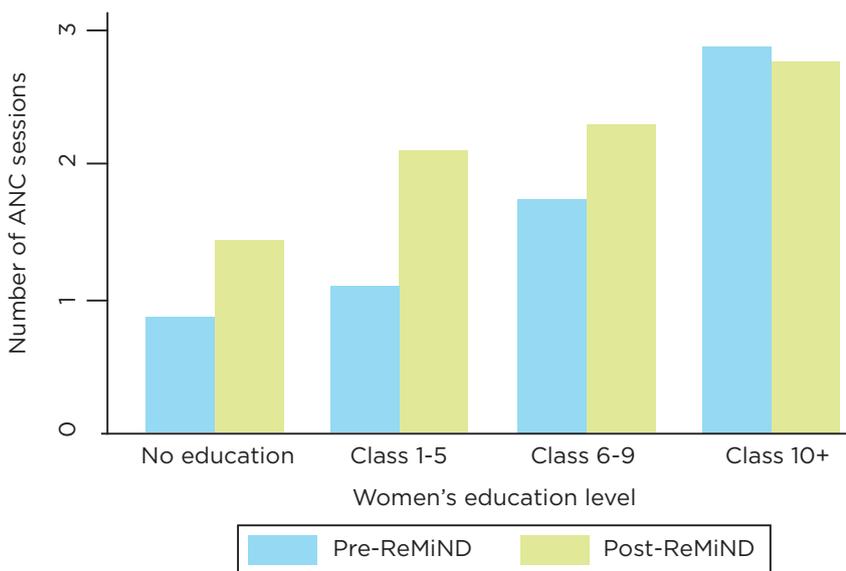
ANTENATAL CARE

The program appears to have had a major success in antenatal care. The average woman accessed 41 percent more ANC sessions at midterm than baseline, with 58 percent more women receiving the recommended number of three or more antenatal care checkups (from 18.9 percent of women to 30.2 percent). Most importantly, the effects were concentrated among households with lower socioeconomic status, with much larger increases in ANC checkups among women with no or low education.

58%

MORE WOMEN RECEIVED THE RECOMMENDED NUMBER OF THREE OR MORE ANTENATAL CARE CHECKUPS

Figure 4. Number of antenatal sessions completed, by women's education level



The quality of antenatal care remained steady over time. Yet as a result of the increase in the number of ANC sessions accessed, the percentage of women experiencing a given component of quality ANC increased. At midterm, 59 percent more women reported receiving an abdominal exam, while more women also had their blood pressure taken (from 32 percent to 39 percent), and gave blood or urine samples (both increased from 28 percent to 33 percent). This is encouraging, however, 40 percent of women still did not receive any antenatal care at the time of the MTE survey.

INSTITUTIONAL DELIVERY

While these findings are encouraging, there was little significant change in other health outcomes, such as IFA consumption and institutional delivery. Most importantly, institutional delivery rates did not increase over this time period, which is surprising given the large increase in contact between ASHAs and women in the village.

OVERCOMING TRADITIONAL BARRIERS

ASHAs are affected by problems similar to those of their beneficiaries, such as illiteracy and proscriptions on women's behavior and decision making. They also observe similar social practices, such as use of traditional medicine and observance of the caste system. Instances of ASHA visitation being constrained by caste rules were mentioned by community members and SFs. SFs who, in the absence of a government supervisory cadre, had served as ASHAs' de facto supervisors and mentors, played a role in mediating the impact of these social practices on provision of services.

PATHWAYS TO CHANGE

The MTE found that use of mobile phones and the CommCare platform led to significant improvements in ASHAs' work by increasing:

1. ASHAs' efficiency and productivity by compiling and organizing beneficiary information and counseling content on the mobile phone.
2. ASHAs' confidence in their own work, according to SFs and health administrators.
3. Community members' engagement with ASHA counseling, as well as their overall evaluations of ASHAs.

CommCare was particularly valued by ASHAs and SFs for the increase in efficiency and productivity that it afforded. Several ASHAs described using their mobile phone registers instead of paper registers, cutting down on paperwork and saving time. ASHAs had easy access to stored digital information about their beneficiaries, and they mentioned that their mobile phone registers were more reliable than paper registers.

ASHAs' increased productivity was also due to increased engagement among community members, and the community's confidence in them. ASHAs reported that some beneficiary families engaged their services primarily to view the multi-media content on their mobile phones. This is important; ASHAs identified community recognition as an important motivating factor, a source of job satisfaction, and an indicator of their success.

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“She was not allowed by her family to visit a lower-caste home, as she belongs to an upper caste. So, when I get to know this, I visited her house and tried to convince their family members and also motivated her to visit the same. Later she started visiting lower-caste beneficiaries houses as well.”

ASHA Facilitator
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All participant groups mentioned that illiteracy of some ASHAs was an obstacle for implementing CommCare, but not an insurmountable one. ASHAs identified SFs as being extremely helpful in providing support with CommCare, including instruction in use of the app and tech trouble-shooting.

TARGETING MESSAGES TO KEY DECISION MAKERS

MTE results found that ASHAs target decision makers within the household during home visits to ensure that the counseling they provide is acted upon. Although the primary target audience for ASHAs' counseling and messaging is expectant and postpartum mothers, ASHAs understand that the primary household decision makers, including for health decisions involving young mothers, are often mothers-in-law and/or women's husbands. Furthermore, the responses of mothers and mothers-in-law show that there is no single decision maker within a family. Rather, various family members, both within and outside of a household, may participate in or influence decision making surrounding health care and delivery.

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“During the counseling, I ensure one of the family members is also present. Especially if the mother-in-law is present, then it is effective because motivating the mother-in-law is important. She has a big role in any decision of the family.”

ASHA, Mooratganj

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Discussion

ASHA COVERAGE

One of the major successes of ReMiND has been increasing ASHAs' coverage of pregnant women in their community. This proved especially effective at reducing the number of low-coverage ASHAs to less than 20 percent of the total, down from more than 60 percent. While this result is likely due to a combination of reasons, discussions with ReMiND staff point to the presence of the SFs as a primary reason. As part of their job, SFs visited pregnant women alongside the ASHA and carefully monitored ASHA activities, helping ensure that ASHAs visit pregnant women in their area. Building on this success, future efforts to improve ASHA coverage rates should consider increased monitoring and support supervision by the new cadre of ASHA Sanginis.

Although this is promising, nearly a quarter of pregnant women did not receive a home visit. In general, there are many constraints that prevent ASHAs from covering more women; targeting and eliminating these constraints must be a major focus of future work.

Only 44 percent of women received an ASHA visit with a counseling component prior to the intervention, but 72 percent received a counseling visit from their ASHA at the time of the MTE survey. This indicates that the project's mobile job aid that supports counseling is improving coverage of counseling.

KEY MOTIVATING FACTORS

Pride, honor and community recognition that an ASHA gets in the community are a source of motivation for her and hence she continues her work despite challenges in the community, such as restrictions on women's mobility.

INSTITUTIONAL DELIVERY

One of the areas in which ASHAs did not achieve expected outcomes was institutional deliveries, for which the increase (60 percent to 63 percent) was not statistically significant. The qualitative study shed light on some barriers to institutional delivery. ASHAs named several reasons for lower numbers of institutional deliveries, including limited education and awareness, personal or household preference for home deliveries, financial costs, and limited geographic accessibility in terms of transportation. Women mentioned being motivated by the incentive scheme for institutional delivery, and both mothers and mothers-in-law demonstrated an understanding of the benefits of institutional delivery. Findings demonstrated the importance of social networks, personal experiences, peer behaviors, and informal support systems in decision making about delivery. In general, there are many constraints that prevent ASHAs from bringing in more women; targeting and eliminating these constraints must be a major focus of future work.

DANGER SIGNS

While knowledge about danger signs increased, there was no change in health-seeking behavior for complications. This could be because of poor access to facilities, family constraints, or other issues.

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One of the major successes of ReMiND has been increasing ASHAs' coverage of pregnant women in their community.
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Photo by Neeraj Sharma/CRS

Recommendations

Institutional delivery: Identify reasons why women are not delivering in institutions and focus messages on overcoming these barriers.

The mHealth knowledge base: Adopt a stronger evaluation design. The field needs stronger data and, to measure the efficacy of mHealth programs, it is strongly recommended that evaluation design include comparison groups. Additionally, collecting information from other household decision makers (in addition to women) would add additional insight useful for programming.

Supervision makes a positive difference: The program's greatest success has been in increasing ASHAs' coverage of pregnant women in their area. The presence and support of the project's sector facilitators seem to have been significant factors in improving coverage, and lessons learned can be incorporated into work with ASHA Sanginis.

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