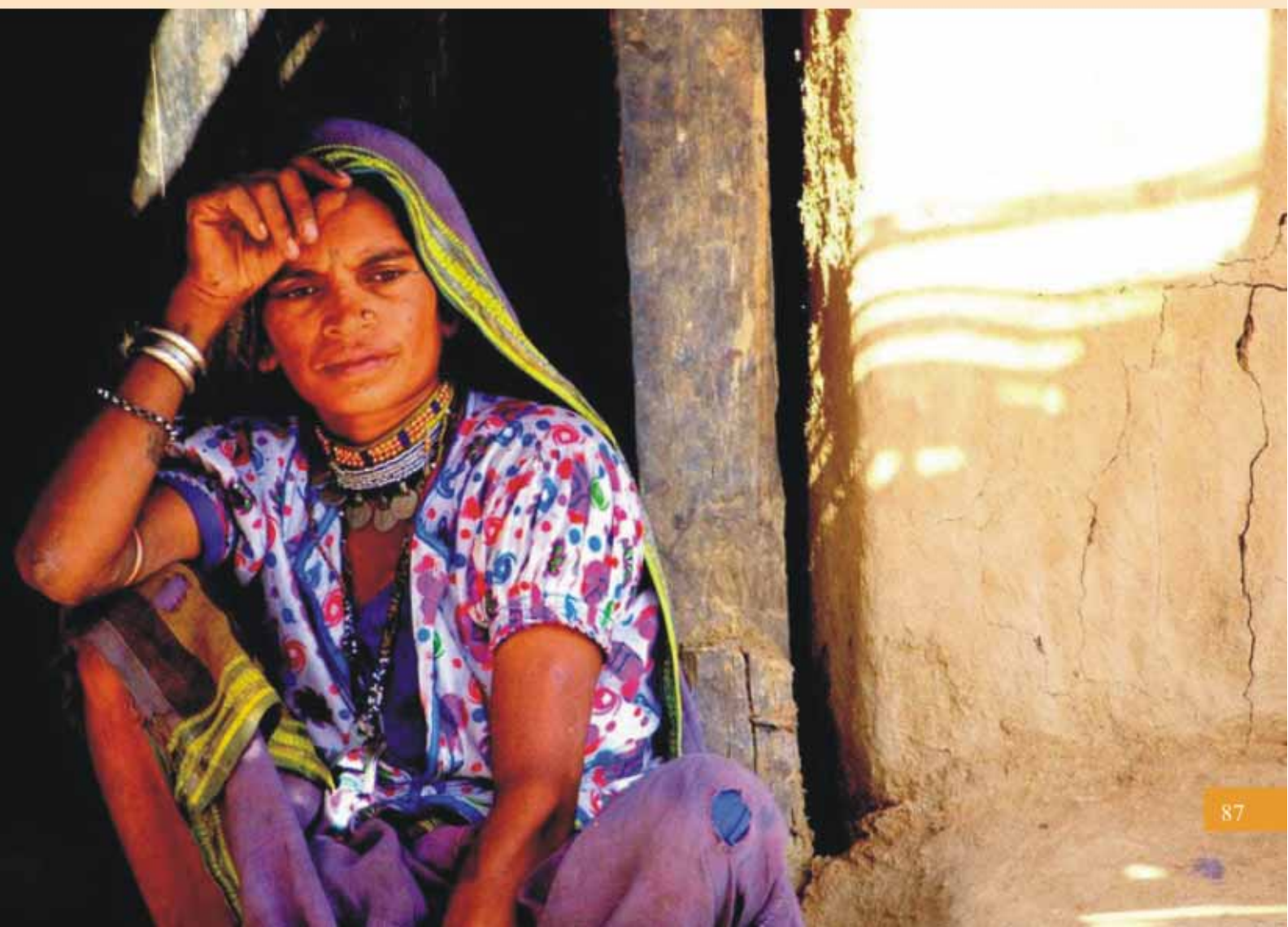


SECTION-III MATERNAL AND CHILD HEALTH



3 Maternal And Child Health



India has made considerable progress in improving health indicators such as life expectancy, child mortality, infant mortality and maternal mortality in the last six decades⁵⁸. Nevertheless, a lot remains to be done. Food and nutrition security issues are a grave concern, given insufficient diets and poor household nutrition security. A large proportion of children and women are malnourished. Complications related to pregnancy and childbirth pose a significant threat to the health of women⁵⁹. Since health is an essential component of development and crucial to the nation's economic growth and stability, availability of basic healthcare is critical to the development process. Recognising the strong link between poverty and ill health, the public provisioning of affordable and reliable healthcare is important.

⁵⁸ Eleventh Five-Year Plan document; chapter on Health and Family Welfare and AYUSH.

⁵⁹ National Family Health Survey (NFHS) reports; NFHS-1, NFHS-2 and NFHS-3.

The National Rural Health Mission (NRHM), a flagship programme of the Government of India, has taken several strides towards this⁶⁰.

Maternal and child health and nutrition are addressed as critical issues in the framework of the Millennium Development Goals (MDGs). The progress towards achievement of MDGs 4 and 5 that specifically address health, however, seems to be slow, especially in some regions.

Millennium Development Goals

Goal 4: Reduce child mortality	
Target 4a: Reduce by two-thirds the mortality rate among children under five	<ul style="list-style-type: none"> 4.1 Under-five mortality rate 4.2 Infant mortality rate 4.3 Proportion of one- year-old children immunised against measles
Goal 5: Improve maternal health	
Target 5a: Reduce by three quarters the maternal mortality ratio	<ul style="list-style-type: none"> 5.1 Maternal mortality ratio 5.2 Proportion of births attended by skilled health personnel
Target 5b: Achieve, by 2015, universal access to reproductive health	<ul style="list-style-type: none"> 5.3 Contraceptive prevalence rate 5.4 Adolescent birth rate 5.5 Antenatal care coverage (at least one visit and at most four visits) 5.6 Unmet need for family planning



⁶⁰"The Millennium Development Goals: A Cross-Sectional Analysis and Principles for Goal Setting after 2015", Lancet and London International Development Centre Commission, Sept 2010.

National Rural Health Mission

Recognising the importance of health in the process of economic and social development and improving the quality of life of citizens, the Government of India launched the National Rural Health Mission to carry out the necessary structural changes in the healthcare delivery system. Launched in 2005, the NRHM is the Government of India's largest public health programme.

Goals

1. Reducing the infant mortality rate (IMR) and maternal mortality rate (MMR).
2. Promoting universal access to integrated and comprehensive public health services.
3. Improving child health, water availability, sanitation and hygiene.
4. Preventing/controlling communicable and non-communicable diseases, including locally endemic diseases.
5. Stabilising the population and the gender and demographic balance.
6. Revitalising local health traditions and systems of health (ayurveda, yoga and naturopathy, yunani, siddha, and homoeopathy; AYUSH).
7. Promoting healthy lifestyles.
8. Appointing an accredited social health activist (ASHA) in every village.

Maternal and child health in PAHELI 2011 survey: The approach

It was important to create measurable indicators that could be used by ordinary people. We held discussions with experts to identify these critical but easily measurable indicators. The ease of measurement of these indicators was tested in the field in a series of pilot surveys that were carried out by the core team. Based on experts' comments and field experience, the domains from MDG 4 and 5 we chose to study were the following:

- Pregnancy care
- Childbirth
- Infant and young child care, feeding and immunisation

We selected indicators in the domains related to mothers, infant and young child care, health and nutrition on the basis of ease of measurement by ordinary people were selected. These indicators pertained to antenatal care, institutional deliveries and post-natal care, the facilities available and availed of during pregnancy and childbirth, infant and young child feeding, and immunisation.

The NRHM addresses various components of the indicators included in MDGs 4 and 5. The Janani Suraksha Yojana (JSY) is a safe motherhood intervention being implemented with the objective of reducing maternal and neonatal mortality rates by promoting institutional deliveries among economically disadvantaged pregnant women. The JSY integrates cash assistance with delivery and post-delivery care. The increase in the percentage of institutional deliveries is the yardstick of performance of the JSY. It has identified the accredited social health activist or ASHA (the key grassroots-level worker under the NRHM) as an effective link between the Government and poor pregnant women. The Integrated Child Development Services (ICDS), a scheme in operation since 1975, provides health, nutrition and non-formal education opportunities to infants and young children and their mothers. It provides for supplementary nutrition, immunisation, health check-ups, preschool non-formal education, nutrition and health education and referral services. Apart from healthcare outcomes in households, the PAHELI 2011 survey assessed people's experience with the JSY, ICDS and ASHAs.

Methods and tools

The tool used for collecting information was largely pictorial. The visualisation helped to improve engagement with the community. The respondents were mothers of young children. Enquiries pertaining to pregnancy care, childbirth, post-natal care and immunisation were made to mothers who had at least one child less than three years old at the time of the survey. Mothers were interviewed about aspects of the care available and availed of during pregnancy, delivery and post delivery.

Respondents were also asked about their links to the health care schemes provided by the government and their participation in these was assessed. An attempt was made to look into the perceived difficulties of taking advantage of government facilities and provisions.


Mothers of young children were interviewed to get a sense of the prevalent practices in feeding and immunising infants and young children.

The nutritional status of children was assessed by recording their weights. Weight-for-age was used as an indicator for assessing the extent of the problem of underweight children below six. Weighing scales were arranged from anganwadis or health centres and local functionaries cooperated in the exercise. Since anganwadis are the service delivery points of the ICDS, it was possible to assess mothers' knowledge about the anganwadi in their village. Edible salt in India is to be iodised. Samples of the salt used for cooking were collected and analysed to determine the iodine level.


Samples of sections from the tool used for the enquiries are shown here. The salient findings are summarised in the sections that follow.

Place of delivery


14- When was born? (Name of the youngest <3 year old child) (This question is applicable if response is 'at home' go to Q13. If response is 'government hospital or private institution' go to Q16.)



1- At home



2- Government hospital



3- Private institution

Write code


14- In case of home delivery, was there any skilled person (doctor/nurse) who helped you?

Yes-1


No-2

Write code


14- In case of an institutional delivery, how did you reach the institution? (If response is 'car/taxi' go to Q15 other wise go to Q16.)




1- On foot




2- Auto-rickshaw



3- Car/taxi



4- Bicycle



5- Ambulance

6- Other: (Specify) Write code

15- In case of car/taxi/jeep, who did the arrangements?

Q15-1: Other relatives-1;
Any other health worker/parent/...-2;
Don't know-3

Yes-1; No-2; Don't know-3

Write code

16- Did any health worker stay with you at the facility during the birth? (If response is 'yes' go to Q17 other wise go to Q18.)

Q16-1: Yes of the above-1;
Q16-2: No of the above-2

Yes-1; No-2; Don't know-3

Write code

17- Did any health worker visit you shortly (within a week) after you delivered? (Name of the youngest <3 year old child) (If response is 'yes' go to Q17 other wise go to Q18.)

Q17-1: Yes-1;
Q17-2: No-2;
Q17-3: Don't know-3

Yes-1; No-2; Don't know-3

Write code

18- If yes, then who visited post?

Q18-1: Yes-1;
Q18-2: No-2;
Q18-3: Don't know-3

Yes-1; No-2; Don't know-3

Write code

WEIGHT (Kg) & HEIGHT (cm)

41A- (If you are a mother of more than one child, please complete)

Child	Name	DOB (dd/mm/yy)	Age (months)	Gender (M/F)	Adult weight	Adult child's weight
Child 1						
Child 2						
Child 3						
Child 4						

41B- (If you are a mother of 1 child, please complete)

Child	Name	DOB (dd/mm/yy)	Age (months)	Gender (M/F)	Child's weight
Child 1					
Child 2					
Child 3					
Child 4					

41C- (Check on weight and height)

Weight	Height

19- Did you ever breast-feed (Name of the youngest child in the rang <3 year)?

Yes -1;
No -2;

Write code

Findings

This section describes the survey's findings in the following domains from which the various indicators were selected.

A. Indicators for maternal health	B. Indicators for child health	C. Households' interaction with facilities
<ul style="list-style-type: none"> • Antenatal and post-natal care • Place of delivery: Institutional deliveries • Incentives; difficulties perceived by households in gaining the incentives 	<ul style="list-style-type: none"> • Initiation of breastfeeding • Practices in feeding young children • Immunisation 	<ul style="list-style-type: none"> • Awareness of mothers about anganwadis and their services
<ul style="list-style-type: none"> • Iodine content of edible salt 		

A. Maternal health correlates

Although the MDG components tracked with respect to maternal health were institutional deliveries and the presence of skilled personnel during childbirth, a variety of indicators related to these domains were also measured. This section describes the PAHELI 2011 findings on these indicators.

Care in pregnancy: antenatal and post natal

It is recommended that pregnant women undergo at least three antenatal check-ups and take two tetanus toxoid (TT) injections. Widespread anaemia because of iron deficiency is prevalent among Indian

women, particularly pregnant women, and this affects safe motherhood and child health. Anaemia has increased from 52% to 56% among married women and from 50% to 58% among pregnant women (NFHS-1 and 2). Pregnant women are advised to take full courses of iron folic acid (IFA) tablets. These are recommended after delivery as well. Table 1 summarises the check-ups undergone, TT injections received and IFA tablets taken by rural women in the PAHELI 2011 districts.

TABLE 1: SERVICES AVAILED OF BY PREGNANT WOMEN*				
District	No. of respondents	Injections, check-ups and IFA tablets (%)		
		Received at least one TT injection	Underwent at least one check-up	Took IFA tablets during pregnancy
Gumla	448	96.4	82.8	84.4
Hardoi	441	71.1	36.6	39
Korba	384	90.6	82.3	77
Nalanda	425	87.8	58.1	57.2
Rajgarh	396	83.7	62.1	41
Sundargarh	314	97.1	91.7	92
Udaipur	414	87.6	77.2	73.4
Total **	2,822	87.4	69	65.3
Bhilwara	366	85.3	73.7	55.5

* Enquiries made among mothers with at least one child less than three years old. Rows do not add up to 100. **Total does not include Bhilwara.

The survey data reveal that nearly 70% of the women in the seven districts had at least one antenatal check-up⁵¹. At least one TT injection was taken by 87.4% of the women. These figures varied across the districts. In Hardoi, only 36.6% of the women reported going for at least one check-up during pregnancy as compared to 91.7% of women in Sundargarh. The survey approached the two issues (antenatal check-ups and TT injections) independently so as to elicit the best responses. If asked together, there was the risk that women would recall the details of one more clearly than the other. Those who underwent a check-up or received a TT injection were asked where they did so. As seen in Table 2, a government facility was used in 80% of the cases for antenatal care. In Sundargarh, more than 90% of the women reported that they went to a government facility for antenatal check-ups. In Nalanda only 61% did so.

Overall, the results indicated that the services extended to pregnant women by the government were utilised by a vast majority. However, there were variations among the districts. Hardoi showed very low figures compared to Sundargarh, where participation was very high.

Across the seven districts surveyed, 65% of the women took IFA tablets during pregnancy. The percentage of women who took IFA tablets during pregnancy was the highest (92%) in Sundargarh, where 97% received at least one TT injection and 92% (the highest among the districts surveyed) underwent at least one antenatal check-up. On the other hand, in Hardoi, where only 39% of the women took IFA tablets during pregnancy, just 37% (the lowest among the districts surveyed) availed themselves of antenatal check-up facilities at least once. In Rajgarh, only 41% of the women reported having taken IFA tablets during pregnancy. The figure was low (57%) in Nalanda as well. In Bhilwara, 85% of the women

⁵¹ Information on antenatal check-ups was sought from women who had at least one child less than three years old at the time of the survey.

reported having received at least one TT injection, 74% reported having undergone at least one antenatal check-up. 56% reported taking IFA tablets during pregnancy.

TABLE 2: SOURCE OF ANTENATAL CARE					
District	No. of women who went for at least one check-up or received one TT injection during pregnancy	Govt	Private	Others*	Total
Gumla	436	85.6	9.9	4.6	100
Hardoi	324	76.5	16.7	6.8	100
Korba	351	71.2	22.5	6.3	100
Nalanda	381	60.6	30.5	8.9	100
Rajgarh	334	85.6	9.9	4.6	100
Sundargarh	307	92.2	6.2	1.6	100
Udaipur	367	87.5	6.8	5.7	100
Total**	2,500	80	16.2	3.8	100
Bhilwara	323	76.5	13.6	9.9	100

* Others include women who did not know or did not report the source. ** Total does not include Bhilwara.

Taking IFA tablets during pregnancy was linked to women undergoing antenatal check-ups and receiving TT injections. Table 3 compares the percentage of women who took IFA tablets during pregnancy that had an antenatal checkup/received one TT injection to those who did neither. The table shows that the percentage of women who took IFA tablets during pregnancy, had at least one antenatal check-up or received at least one TT injection was more than double that of those who did neither.

TABLE 3: LINK BETWEEN TAKING IFA TABLETS AND PRENATAL CARE			
District	Number of respondents	Women who received at least one TT injection or underwent one check-up (%)	Women who reported not receiving even one TT injection or undergoing one check-up (%)
		Consumed IFA tablets	
Gumla	448	86	48.8
Hardoi	440	49.4	27.6
Korba	383	82.3	43.1
Nalanda	425	61.7	33.3
Rajgarh	393	47.6	16.9
Sundargarh	314	93.2	64.3
Udaipur	413	81.5	30
Total**	2,816	72.1	31.5
Bhilwara	366	62.2	22.4

* Enquiries on prenatal care were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

The data strongly indicate the importance of antenatal check-ups and maintaining contact with the facility providing prenatal care.

Place of delivery

Institutional deliveries minimise maternal mortality and also reduce neonatal and infant mortality. The JSY focuses on increasing the rate of safe institutional deliveries, especially among the poor and

vulnerable sections of the population. The PAHELI 2011 survey attempted to assess the rate of institutional deliveries in the surveyed districts. Other provisions of the JSY were also assessed.

Women with at least one child younger than three years old were asked questions on the place of delivery and the various aspects addressed by government schemes. Table 4 gives details on the place of delivery.

TABLE 4: DETAILS ON PLACE OF DELIVERY*									
District	No. of respondents	Place of delivery (%)		Status of facility women went to (%)		Assistance by health worker for women who gave birth in an institution (%)		Assistance by health worker for women who gave birth at home (%)	
		Institution	Home	Govt	Pvt	Health worker stayed at institution	Health worker visited after birth	Skilled person present during delivery	Health worker visited after birth
Gumla	454	41.6	58.4	86.2	13.8	80.4	65.1	76.6	23.8
Hardoi	446	44.6	55.4	82.9	17.1	85.4	37.7	61.9	8.1
Korba	389	34.2	65.8	66.9	33.1	71.4	49.6	58.6	22.3
Nalanda	423	71.6	28.4	71.3	28.7	63.7	41.3	61.7	17.5
Rajgarh	397	78.1	21.9	89.4	10.7	48.4	17.4	32.2	5.8
Sundargarh	288	75.7	24.3	93.1	6.9	89.5	65.6	30	31.4
Udaipur	414	66.7	33.3	92	8	42.8	39.5	73.9	18.8
Total **	2811	57.9	42.1	82.8	17.2	65.9	42.7	61.8	18.1
Bhilwara	367	54	46.1	79.8	20.2	49	37.4	55	12.4

* Enquiries on the place of delivery were made among mothers with at least one child less than three years old; the rows do not add up to 100%. **Total does not include Bhilwara.

Across the seven districts, it was found that a higher proportion of women reported giving birth in an institution (57.9%) than at home (42.1%). However, the reverse situation was observed in Gumla, Hardoi, and Korba. Overall, the majority of institutional deliveries (82.8%) took place in government facilities.

Institutional deliveries and the presence of skilled personnel during childbirth are tools to control maternal, neonatal and infant mortality. The findings reveal that the surveyed districts met the targets for institutional deliveries and skilled personnel by 50%. Concrete strategies need to be mapped out to further progress in these areas to meet the MDGs on maternal and infant mortality.

Presence of health worker/skilled person during delivery

In the case of institutional deliveries, a health worker stayed with the mother 65.9% of the time. In Sundargarh, as many as 89.5% of the women reported that a health worker stayed with them at the institution during delivery. However, in Udaipur, only 42.8% of the women reported this. The percentage of such women was low (48.4%) in Rajgarh as well. As shown in Table 5, the majority of women (64.1%) reported that an ASHA stayed with them during delivery. In some cases, an auxiliary nurse midwife (ANM) (9.4%) or anganwadi worker (AWW) (4.0%) was reported to have stayed with the women at the institution during delivery. As per the JSY, ASHAs are supposed to stay with women in an institution until they are discharged after delivery.

TABLE 5: ASSISTANCE BY HEALTH WORKER DURING INSTITUTIONAL DELIVERY

District	No. of institutional deliveries	Women who reported health worker stayed during delivery* (%)	Type of health worker who stayed during delivery (%)					Total
			ASHA	ANM	AWW	Not ASHA, ANM or AWW	No response	
Gumla	189	80.4	71.1	12.5	4	7.9	4.6	100
Hardoi	199	85.4	77.7	3.5	1.8	16.5	0.6	100
Korba	133	71.4	47.4	11.6	8.4	31.6	1.1	100
Nalanda	303	63.7	72	8.3	1	15	3.6	100
Rajgarh	310	48.4	31.3	8.0	10.7	41.3	8.7	100
Sundargarh	218	89.5	94.4	3.1	0	1	1.5	100
Udaipur	276	42.8	28	26.3	6.8	37.3	1.7	100
Total**	1,826	65.9	64.1	9.4	4	19.3	3.2	100
Bhilwara	198	49.0	38.1	24.7	13.4	23.7	0	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

While the involvement of ASHAs was high in Sundargarh (94.4%), Hardoi (77.7%), Nalanda (72.0%) and Gumla (71.1%), it was low in Udaipur (28%), Rajgarh (31.3%) and Korba (47.4%). However, in these three districts, ASHAs, ANMs or AWWs were reported to have been present at the institution during delivery by 60% to 70% of the women.

In the case of home deliveries, a skilled person such as a doctor or trained "dai" was reported to have been present during delivery in 61.8% of the cases (Table 4). In Gumla, the presence of such skilled persons was reported by 76.6% of the women, the highest across seven districts. This was limited in Sundargarh (30.0%) and Rajgarh (32.2%). However, home deliveries were just above 20% in both these districts.

In the PAHELI 2011 survey, ASHAs and AWWs were also contacted to understand their profile in terms of training, the monetary benefits received and contacts with their superiors or supervisors. The participation of ASHAs was low in Udaipur, Rajgarh and Korba, while they were very active in Sundargarh. A close look at their profiles revealed some important differences in the training received and their contacts with ANMs in these districts.

Only 8.9% of the ASHAs in Udaipur, 6.7% in Korba and 1.7% in Rajgarh reported receiving monthly training. In contrast 33.3% of the ASHAs in Sundargarh reported having received monthly training, the highest among all the districts. A wide gap was also observed in contact between ASHAs and ANMs in these districts. In Sundargarh, 59.3% of the ASHAs reported that they had had weekly contact with ANMs in the past month. This frequency was far better than that in all the other districts. Weekly contact with ANMs was reported by only 14% of the ASHAs in Nalanda, 13.3% in Korba, 8.9% in Udaipur, 6.9% in Hardoi and 5.1% in both Gumla and Rajgarh. More frequent contact with ANMs may have played a role in making the ASHAs more active, due to tighter monitoring and/or continued guidance and motivation.

Post-delivery visit by health worker

Women were asked whether any health worker had visited them in the week after they delivered their youngest child. Tables 6 and 7 give information on the post-delivery contact between health workers and women who gave birth in institutions and those who did so at home.

Post-delivery visits by health workers were more likely to be made in the case of institutional deliveries. Across the seven districts, 42.7% of the women who delivered in an institution reported that they were visited by a health worker shortly after the birth of their child. However, only 18.1% women who delivered at home reported such post-delivery visits by health workers.

When these visits were broken down by type of health worker, it was observed that the percentage of post-delivery visits made by ASHAs and ANMs was almost the same in the case of institutional deliveries and home deliveries. Visits by ASHAs were reported by 59.1% of the women who had institutional deliveries and by 56.1% of those who gave birth at home. Among women who had institutional deliveries, 23.9% reported post-delivery visits by ANMs. Of those who gave birth at home, 21.5% reported visits by ANMs. Post-delivery visits by AWWs were higher in the case of home deliveries (15.4%) than institutional deliveries (9.2%).

Though there were inter-district variations, post-delivery visits by health workers were high in the case of institutional deliveries. This postnatal follow up seemed to be a big advantage of institutional deliveries.

TABLE 6: POST-DELIVERY VISIT BY HEALTH WORKERS IN INSTITUTIONS

District	No. of institutional deliveries	Women who were visited by a health worker after delivery (%)	Type of skilled health worker who visited (%)						
			ASHA	ANM	AWW	Others	Do not know	No response	Total
Gumla	189	65.1	65	26	4.1	1.6	0.8	2.4	100
Hardoi	199	37.7	76	10.7	5.3	6.7	0	1.3	100
Korba	133	49.6	45.5	25.8	21.2	0	1.5	6.1	100
Nalanda	303	41.3	73.6	16	5.6	1.6	0.8	2.4	100
Rajgarh	310	17.4	20.4	63	3.7	9.3	1.9	1.9	100
Sundargarh	218	65.6	81.8	7.7	4.2	2.8	1.4	2.1	100
Udaipur	276	39.5	22	40.4	23.9	9.2	1.8	2.8	100
Total**	1,826	42.7	59.1	23.9	9.2	4	1.2	2.6	100
Bhilwara	198	37.4	40.5	29.7	23.0	2.7	0	4.1	100

**Total does not include Bhilwara.

TABLE 7: POST-DELIVERY VISIT BY HEALTH WORKERS AT HOME*

District	No. of women who gave birth at home	Women who were visited by a health worker after delivery (%)	Type of skilled health worker who visited (%)						Total
			ASHA	ANM	AWW	Others	Do not know	No response	
Gumla	265	23.8	69.8	15.9	6.4	6.4	0	1.6	100
Hardoi	247	8.1	80	15.0	0	5	0	0	100
Korba	256	22.3	35.1	28.1	29.8	1.8	1.8	3.5	100
Nalanda	120	17.5	76.2	9.5	14.3	0	0	0	100
Rajgarh	87	5.8	20.0	20.0	60.0	0	0	0	100
Sundargarh	70	31.4	77.3	13.6	0	4.6	0	4.6	100
Udaipur	138	18.8	23.1	42.3	23.1	7.7	0	3.9	100
Total**	1,183	18.1	56.1	21.5	15.4	4.2	0.5	2.3	100
Bhilwara	169	12.4	19.1	52.4	23.8	4.8	0	0	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

Mode of transport to institution

The mode of transport reportedly used by women to reach an institution for delivery is shown in Table 8. On an average, across the seven districts, an ambulance was used in only 6% of the cases. However, in Sundargarh, almost a quarter of the women said that they reached the facility in an ambulance. The most common mode of transport was a car or taxi (64%).

TABLE 8: MODE OF TRANSPORT TO INSTITUTIONS FOR DELIVERY*

District	No. of institutional deliveries	Type of transport used by women to reach the institution (%)							Total
		On foot	Bullock cart	Car/Taxi	Bicycle	Ambulance	Others	No response	
Gumla	189	8.5	0.5	60.3	3.7	4.2	20.6	2.1	100
Hardoi	199	0.5	3.5	60.3	2.5	0.5	31.7	1	100
Korba	133	5.3	0	56.4	0.8	0.8	36.8	0	100
Nalanda	303	11.6	1.7	63	0.7	2.6	17.2	3.3	100
Rajgarh	310	3.6	1	60	0.3	5.5	29	0.6	100
Sundargarh	218	4.1	0	63.8	2.3	24.8	0	5.1	100
Udaipur	276	8.0	0.4	78.6	0.7	3.3	8.3	0.7	100
Total**	1,628	6.2	1	64	1.4	6	19.4	1.9	100
Bhilwara	198	2.5	0	87.4	0	2	6.1	2	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

Table 9 shows that arrangements for a car or taxi in a majority of the cases (80.5%) was made by the households themselves. ASHAs were reported to have arranged cars or taxis in 14.2% of the cases. It should be noted that it is difficult to establish who paid for the car or taxi.

TABLE 9: ARRANGEMENT OF CAR/TAXI FOR REACHING INSTITUTIONS*

District	Number that went by car/taxi, jeep	ASHA	Households	Relatives	Other health workers	Do not know	No response	Total
Gumla	114	20.2	75.4	2.6	0.9	0	0.9	100
Hardoi	120	20.8	78.3	0	0	0	0.8	100
Korba	75	2.7	89.3	4	4	0	0	100
Nalanda	191	19.9	74.4	2.1	0	0.5	3.1	100
Rajgarh	186	3.2	88.7	4.3	0.5	0.5	2.7	100
Sundargarh	139	27.3	69.8	2.9	0	0	0	100
Udaipur	217	7.4	86.6	1.8	2.8	0.5	0.9	100
Total**	1,042	14.2	80.5	2.5	1.1	0.3	1.4	100
Bhilwara	173	11	79.2	3.5	4.6	1.2	0.6	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

Monetary benefits under Janani Suraksha Yojana

TABLE 10: MONETARY BENEFITS UNDER JSY*

District	No. of women who had institutional births and responded to JSY queries	Those who received money under JSY (%)	Average amount received	Details on the money received under JSY							
				Whether fees were paid to receive the amount (%)				Whether problems were faced in receiving benefits (%)			
				Yes	No	NR	Total	Yes	No	NR	Total
Gumla	189	83.1	1,604	14.7	82.2	3.2	100	28.7	68.2	3.2	100
Hardoi	199	79.4	1,389	8.9	89.2	1.9	100	34.2	63.3	2.5	100
Korba	133	76.7	1,388	11.8	87.3	1	100	19.3	79.7	1	100
Nalanda	303	68.3	1,404	38.2	59.4	2.4	100	19.3	79.7	1	100
Rajgarh	310	87.7	1,399	10.3	87.1	2.6	100	28.3	68.8	2.9	100
Sundargarh	218	90.8	1,352	7.6	86.9	5.6	100	9.6	86.4	4	100
Udaipur	276	90.9	1,527	4	94	2	100	15.1	83.3	1.6	100
Total **	1,628	82.4	1,437	14.5	82.8	2.7	100	21.9	75.7	2.4	100
Bhilwara	198	78.8	1,460	5.1	92.3	2.6	100	7.7	89.1	3.2	100

* Enquiries were made on the JSY among mothers with at least one child less than three years old; NR: No Response. ^ Details of type of problems faced are provided in table 15 later in the section. **Total does not include Bhilwara.

The JSY scheme aims to reduce infant and maternal mortality rates by providing financial incentives to women who live below the poverty line (BPL) so that they opt to give birth in a hospital. Table 10 shows that across seven districts, 82.4% of the women reported receiving money under the JSY. The average amount received was Rs. 1,437. Most women (82.8%) reported not having paid an additional fee to obtain the money. There were variations across districts in the percentage of women who reported having paid fees. This ranged from 4% in Udaipur to 38.2% in Nalanda. Thus the results indicated that the overall performance of the JSY was quite satisfactory.

Tables 11 to 14 provide details on the JSY monetary benefits in terms of the place where the money was received by women who had institutional deliveries, the functionary through whom the benefit was received, the mode of payment and whether the money was paid in instalments.

TABLE 11: PLACE WHERE MONEY WAS RECEIVED UNDER JSY*

District	No. of women who received JSY money	Where the JSY money was received by women who had institutional deliveries (%)			
		Home	Institutions	No response	Total
Gumla	157	7.6	85.4	7	100
Hardoi	158	5.1	94.3	0.6	100
Korba	102	4.9	90.2	4.9	100
Nalanda	207	4.3	95.2	0.5	100
Rajgarh	272	1.8	94.1	4	100
Sundargarh	198	12.6	77.8	9.6	100
Udaipur	251	0.8	99.2	0	100
Total**	1,345	4.9	91.5	3.6	100
Bhilwara	156	7.1	91.7	1.3	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

TABLE 12 : FUNCTIONARY THROUGH WHOM MONETARY BENEFITS WERE RECEIVED

District	No. of respondents*	ASHA	AWW	ANM	Others	No response	Total
Gumla	157	17.2	7.6	46.5	22.9	5.7	100
Hardoi	158	32.3	1.3	5.7	57	3.8	100
Korba	102	8.8	1	45.1	42.2	2.9	100
Nalanda	207	15	4.3	41.1	34.8	4.8	100
Rajgarh	272	1.5	1.5	37.1	47.8	12.1	100
Sundargarh	198	59.1	16.7	2.5	0	21.7	100
Udaipur	251	4.4	2.8	21.5	67.3	4	100
Total**	1,345	18.6	5.1	27.7	40.1	8.5	100
Bhilwara	156	5.1	5.1	37.8	49.4	2.6	100

* Respondents were women who had institutional deliveries and claimed to have received money under the JSY. ** Total does not include Bhilwara.

TABLE 13: MODE OF PAYMENT UNDER JSY*

District	No. of respondents*	Cheque	Cash	Others	No response	Total
Gumla	157	76.4	19.1	0.6	3.8	100
Hardoi	158	93.7	3.2	0	3.2	100
Korba	102	86.3	12.7	0	1	100
Nalanda	207	77.3	19.3	0.5	2.9	100
Rajgarh	272	87.1	8.5	1.1	3.3	100
Sundargarh	198	78.8	14.1	0	7.1	100
Udaipur	251	86.5	11.2	0.4	2	100
Total**	1,345	83.7	12.4	0.4	3.4	100
Bhilwara	156	73.1	25	0	1.9	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

TABLE 14: WHETHER MONETARY BENEFIT WAS RECEIVED IN INSTALMENTS*

District	No. of respondents*	Yes	No	No response	Total
Gumla	157	19.7	77.1	3.2	100
Hardoi	158	6.3	91.8	1.9	100
Korba	102	13.7	85.3	1	100
Nalanda	207	6.8	91.8	1.4	100
Rajgarh	272	17.6	80.1	2.2	100
Sundargarh	198	4	88.4	7.6	100
Udaipur	251	6.8	92	1.2	100
Total**	1,345	10.6	86.8	2.7	100
Bhilwara	156	6.4	91.7	1.9	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

As shown in Table 11, the majority of the beneficiaries (91.5%) who reported receiving monetary benefits under the JSY said that they were given the amount in an institution. Table 12 shows that almost half the women received the money via an ASHA (18.6%), an AWW (5.1%) or ANM (27.7%). A cheque was handed over in the majority (83.7%) of cases (Table 13). In Hardoi, 94% of the payments were made by cheques. The money was disbursed in full, as opposed to installments, in 87% of the cases (Table 14).

It is positive to note that 76% of the women who were beneficiaries of the JSY across the seven districts reported that they faced no problems in receiving what they were entitled to (Table 10). Table 15 summarises the difficulties in receiving the benefits that were reported by 22% of the beneficiaries. *It has to be noted that since the proportion of those who claimed to have faced difficulties was low, the information on the nature of the difficulties pertains to an even smaller proportion.* Of the women who reported facing difficulties, 23.5% indicated that paper work was the problem. Encouragingly, the behaviour of health workers was not a major problem, with only 4.8% of women mentioning it. On average, across the seven districts, only 12% of the beneficiaries reported that distance was a problem, 24.4% in Gumla and 21.1% in Udaipur cited it as a reason. In Hardoi, only 2% of the beneficiaries said this was a problem.



TABLE 15: DIFFICULTIES IN OBTAINING JSY MONETARY BENEFITS*

District	No. of respondents	Distance to the health facility	Paper work	Inconvenient timings	Behaviour of health workers	Others	No response	Total
Gumla	45	24.4	28.9	13.3	2.2	20	11.1	100
Hardoi	54	1.9	31.5	1.9	7.4	44.4	13	100
Korba	20	15	15	30	0	20	20	100
Nalanda	40	5	20	12.5	5	25	32.5	100
Rajgarh	77	9.1	16.9	1.3	6.5	35.1	31.2	100
Sundargarh	19	15.8	21.1	15.8	0	10.5	36.8	100
Udaipur	38	21.1	28.9	2.6	5.3	28.9	13.2	100
Total**	293	11.9	23.5	7.8	4.8	29.7	22.2	100
Bhilwara	12	8.3	41.7	0	8.3	16.7	25	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

The findings discussed so far indicate that progress is under way in achieving the maternal health correlates assessed. Some districts performed very well with regard to the assessed indicators while others ranked lower. Mothers seemed to be participating in government schemes, though there were differences among the districts. Contact with health workers and institutions increased the participation of women in maternal health schemes. The JSY and ASHAs seemed to be performing satisfactorily. Inter-district variations in these indicators could be linked to the profile, training and supervision of grassroots-level functionaries.

B. Child health correlates

In the survey related to children's health, the immunisation status and a number of indicators affecting infant and young child health were examined. These indicators included feeding practices and the nutritional status of young children. Information on the immunisation status and feeding practices of the youngest child less than three years old at the time of the survey was sought, while exclusive breastfeeding was assessed in the case of infants less than six months old. The nutritional status was assessed by estimating the extent to which children younger than six were underweight.

Immunisation

The data on immunisation summarised in Tables 16 to 18 is based on the immunisation cards of children. Entries made on the immunisation cards available were used to determine the immunisation status. Table 16 shows that immunisation cards were available in 83.6% of the households. In individual districts, the percentages of households ranged from 71% (Hardoi) to 94% (Sundargarh). In Hardoi and Udaipur, there were no cards available in the households of nearly 30% of the children.

TABLE 16: HOUSEHOLDS WHERE IMMUNISATION CARDS WERE AVAILABLE

District	No. of respondents*	Yes (%)	No (%)	Total
Gumla	465	89.9	10.1	100
Hardoi	479	70.8	29.2	100
Korba	425	91.8	8.2	100
Nalanda	442	87.1	12.9	100
Rajgarh	391	83.1	16.9	100
Sundargarh	355	94.4	5.6	100
Udaipur	486	72.6	27.4	100
Total **	3,043	83.6	16.4	100
Bhilwara	376	87.2	12.8	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.

Despite the fact that most of the households (83.6%) in the seven districts had immunisation cards, only a small proportion of the cards had entries that were clear and legible and therefore useable. Tables 17 and 18 give immunisation details as recorded on the immunisation cards of the children.

IMMUNIZATION SCHEDULE

Infant and Child Immunization Chart

	6 Antigens schedule	DPT	BCG	Polio	Measles	Vitamins
	On birth		BCG1			
1	1 and a half months	DTP1		Polio1		
2	2 and a half months	DTP2		Polio2		
3	3 and a half months	DTP3		Polio3		
4	9 and a half months				Measles	Vitamins A
5	15-24 months	DPT booster		Polio booster		Vitamins A2 and 3

TABLE 18: IMMUNISATION STATUS OF CHILDREN 12-23 MONTHS OLD (%)*

No. of children	BCG	At least three polio doses	At least three DPT doses	Measles vaccine	Full Immunization **
354	40.7	49.4	49.7	45.5	11.3

*Includes Bhilwara. ** Includes BCG, at least three polio doses, at least three DPT doses and measles vaccine.

Nearly 50% of the children were immunised with BCG vaccine, polio vaccine, DPT vaccine and measles vaccine. Full immunisation including all these vaccines had been carried out in only 11.3% of the cases. The small sample size should be kept in mind while considering this data.

Infant and young child feeding

Sound infant and young child feeding practices are crucial for the optimum growth and health of children. Information on feeding practices is tabulated in Table 19. Breastfeeding was universal with 98% of the women reporting to have breastfed their child.

Immediate breastfeeding is recommended so that the newborns get colostrum, the first milk that is very nutritious and has anti-infective properties. Only 60% of the women reported they had breastfed their babies within half an hour of delivery. This was lowest (46%) in Hardoi and highest (77%) in Sundargarh.

It is recommended that infants be exclusively breastfed until six months of age. After this, their diet has to be supplemented with additional food to meet their growing nutritional needs. Most women (75%) began complementary feeding after six months though around 10% reported introducing complementary food between four and six months.

Exclusive breastfeeding is recommended for the first six months so as to minimise the chances of infection. In the first six months, breast milk alone is sufficient to meet the nutritional needs of infants. Respondent mothers with babies less than six months of age at the time of the survey were asked whether their child had been fed anything other than breast milk in the last 24 hours. It was found that 78% of the infants had been exclusively breastfed. Exclusive breastfeeding was the highest in Hardoi (92%) and lowest in Sundargarh (51%)

TABLE 19: INFANT AND YOUNG CHILD FEEDING

District	No. of respondents	Women who ever breastfed their child (%)	Women having a child less than 3 years old									
			Time breastfeeding was initiated (%)					Time semi-solid foods were begun (%)				
			Within half an hour	Within 24 hours	More than 24 hours	No response	Total	Less than 4 months	More than 6 months	4 to 6 months	No response	Total
Gumla	435	99.8	71.9	20.4	6.0	1.6	100	3.5	75.1	8.5	13	100
Hardoi	443	98.9	46.1	35.8	17.4	0.7	100	4.3	77.1	12.4	6.2	100
Korba	372	99.7	55.3	32.6	10.5	1.6	100	3.6	70.9	15.9	9.6	100
Nalanda	397	99	69.2	26	3.6	1.3	100	2.8	85.6	8.3	3.3	100
Rajgarh	422	89.3	57.3	32.9	6.4	3.5	100	8.4	66.7	11.1	13.8	100
Sundargarh	278	100	77	18.4	2.2	2.5	100	7.4	70.3	3.4	19	100
Udaipur	406	98.8	50.4	39.9	9.2	0.5	100	4.4	80.7	9.1	5.9	100
Total **	2,753	97.8	60.2	29.9	8.2	1.6	100	4.8	75.4	10.1	9.7	100
Bhilwara	365	99.7	59.3	33.5	6	1.1	100	7.3	73.2	11.4	8.2	100

* Enquiries were made among mothers with at least one child less than three years old. **Total does not include Bhilwara.



TABLE 20: INITIATION OF BREAST FEEDING AND PLACE OF DELIVERY

District	No. of respondents	Place of delivery of women who breast fed within half an hour of giving birth (%)	
		Home	Institution
Gumla	420	70.7	76.8
Hardoi	434	36.1	59.1
Korba	359	50.7	65.6
Nalanda	385	64.6	72.4
Rajgarh	353	48	62.2
Sundargarh	244	72.6	82.4
Udaipur	396	40.2	55.7
Total**	2,591	53.6	66.9
Bhilwara	353	63.6	58.1

* Enquiries were made among mothers with at least one child less than three years old. Rows do not add up to 100. **Total does not include Bhilwara.

As seen in Table 20, early initiation of breastfeeding (within half an hour of giving birth) was reported more often in institutional deliveries. Overall, the chance of this was 13.3 percentage points higher if the delivery took place in an institution (66.9%) than if it happened at home (53.6%). This could have been due to the supervision of health personnel in institutions. In Gumla, Nalanda and Sundargarh, the difference was remarkable (less than 10 percentage points) by place of delivery. Interestingly, in Hardoi, early initiation of breastfeeding in institutional deliveries was low (59.1%), but there was a difference of 23 percentage points (highest among all the districts surveyed) between those who had institutional deliveries and those who gave birth at home. It may therefore be presumed that contact with an institution was important in promoting early breastfeeding. Even if institutional deliveries could not instil this good practice among all women (as in Hardoi), the performance was much better compared to cases where deliveries had taken place at home.



Nutritional status of children

TABLE 21: NUTRITIONAL STATUS ASSESSED BY WEIGHT OF CHILDREN LESS THAN SIX YEARS OLD*							
District	0 to 72 Months (%)			Less than 36 Months (%)		36 to 72 Months (%)	
	No. of children	Moderately underweight	Severely underweight	Moderately underweight	Severely underweight	Moderately underweight	Severely underweight
Gumla	257	45.5	28.4	44.6	28.8	51.4	25.7
Hardoi	257	42.4	25.3	40.3	25.2	44.2	25.4
Korba	344	34.9	20.1	33.1	17.8	42	29
Nalanda	230	55.2	46.1	53.1	46.9	62.7	43.1
Rajgarh	199	44.8	30.2	44.9	29.1	44	34.2
Sundargarh	Very few records						
Udaipur	340	60.6	41.8	58.8	40.0	65.3	46.3
Total **	1,634	47	31.5	44.5	30.7	52.5	33.3
Bhilwara	112	54.5	31.3	52.5	30.7	Very few records	

* Nutritional status assessed by weight-for-age using WHO child growth standards:

<http://www.who.int/childdgrowth/standards/weight_for_age/en/index.html>. Children with below -2SD (standard deviation) weight for age Z-score are moderately underweight and those with below -3SD weight for age Z-score are severely underweight.

**Total does not include Bhilwara.

NFHS-3 estimates that 47% of Indian children are underweight. Low body weight in children is linked to morbidity, poor development and scholastic achievement.

In the seven districts surveyed, 47% of the children aged less than 72 months were underweight, with 32% of them severely underweight. A still higher proportion of children aged between 36 to 72 months were undernourished (53%) of them 33% were severely undernourished. The highest proportion of severe undernourished children were in Nalanda (46%) and Udaipur (42%).

Iodisation of salt

Iodine is an essential micronutrient for normal human growth and development. Iodine deficiency can cause physical and mental retardation, cretinism, abortions, still births, deafness, squints and various types of goitre. The Government of India has been implementing the National Iodine Deficiency Disorders Control Programme (NIDDCP), formerly known as the National Goitre Control Programme (NGCP), since 1962. It banned the sale of non-iodised salt in the country in 2006 under the Prevention of Food Adulteration Act. Salt used for cooking has to have at least 15 ppm of iodine.



In the PAHELI 2011 survey, salt samples were analysed for iodine levels using iodine test kits. In the seven districts, 68% of the salt samples obtained from households were iodised at the 15 ppm level. However, in Hardoi and Nalanda, less than half the households were using optimally iodised salt. Sundargarh had the highest usage of iodised salt with 91.6% households using optimally iodised salt (Table 22).

Table 22: SALT IODISATION

District name	No. of households	Finding of iodine test		Not tested	Total
		Sub-optimally iodised	Optimally iodised at 15 ppm level		
Gumla	1,190	20.3	75.3	4.4	100
Hardoi	1,180	58.5	40.6	0.9	100
Korba	1,175	21.4	78.1	0.5	100
Nalanda	1,061	56.3	43.5	0.2	100
Rajgarh	1,178	39.4	57.6	3.1	100
Sundargarh	1,160	8.3	91.6	0.1	100
Udaipur	1,120	19.9	79.7	0.5	100
Total*	8,064	32.2	67.6	1.4	100
Bhilwara	1,332	22.2	77.6	0.2	1000

*Total does not include Bhilwara.

C. Interaction of households with facilities

The anganwadi centre (AWC) is the delivery point for services under the ICDS umbrella. The perception of potential beneficiaries is vital to the sound performance of any scheme or welfare programme. In the PAHELI 2011 survey, we attempted to assess the perception and awareness of mothers of children aged less than six years about the AWC in their village and the services it provided.

Contact with anganwadi centre

Table 23 summarises the level of awareness of women about AWCs and the services offered by them. As AWCs cater to infants, and young children and pregnant and nursing mothers, the mothers of young children were expected to be aware of the AWCs and their services.

Most of the women across the seven districts (96%) knew that an AWC existed in their village. The majority (60.5%) were aware that the AWC provided food for children. Relatively fewer were aware of the other services offered. Overall, not even half the women mentioned food for pregnant and nursing women (37.4%) or immunisation for children (35.6%) as AWC services. In Hardoi, only 20% of the mothers knew about food for women and 14% about immunisation as services offered by the AWC.

Antenatal care and monitoring children's growth were mentioned by less than 30% of the women across the seven districts. Hardoi, where only 8.8% of the women mentioned antenatal care as an AWC service, ranked at the bottom in terms of women availing of this service. The number of women who had at least one antenatal check-up and took IFA tablets during pregnancy was the least in Hardoi. On the other hand, Sundargarh, where 42.7% women (the highest among the districts surveyed) mentioned antenatal check-ups as an AWC service, ranked the highest in terms of the proportion of women who took advantage of this service and took IFA tablets during pregnancy.

AWCs providing non-formal education to children were mentioned by less than 10% of respondents. However, there were inter-district variations. In Rajgarh, only 2.6% of the women mentioned this, while in Sundargarh, 24.1% did so.

TABLE 23: CONTACT WITH ANGANWADI CENTRE*

District	No. of respondents	Women who knew about the AWC (%)	Women who said the following services were provided by AWCs						
			Food for children	Food for pregnant and nursing mothers	Immunisation	Antenatal care	Growth monitoring and referral services	Dietary advice to mothers	Non-formal education for children
Gumla	1,053	99	72.7	55.4	51.7	44.8	35.8	22.9	9.0
Hardoi	1,030	96.0	44.5	20.4	14.0	8.8	7.1	3.2	9.8
Korba	813	98.3	63.7	43.1	39.3	29.5	19.3	7.6	9.6
Nalanda	713	92.4	52.1	28.1	32.9	23.7	17.8	9.6	4.3
Rajgarh	771	95.5	55.3	26.0	24.5	19.3	20.9	10.6	2.6
Sundargarh	661	93.7	76.1	52.2	49.8	42.7	41.0	17.8	24.1
Udaipur	706	95.6	61.5	36.9	40.3	28.9	22.4	12.0	6.4
Total **	5,747	96	60.5	37.4	35.6	27.9	23.0	12.0	9.2
Bhilwara	728	81.6	66.8	39.2	35.7	21.2	16.3	12.5	6.4

*Enquiries were made among mothers with at least one child less than six years old. Mothers were just asked to mention what services are provided (according to them) at the AWC. No time reference was given. Responses were not prompted. Rows do not add up to 100 because of multiple responses. ** Total does not include Bhilwara.



Concluding thoughts: Maternal and child health

With respect to the indicators measured in the PAHELI 2011 survey, the following conclusions can be drawn pertaining to the MDGs on maternal and child health:

C. MATERNAL HEALTH STATUS INDICATORS	Antenatal and post-natal care Place of delivery: Institutional deliveries and incentives; difficulties perceived by households in gaining incentives
<ul style="list-style-type: none"> ● Despite variations seen among the districts, it can be concluded that maternal care services extended by the government during pregnancy are being utilised by a substantial number of women. Contact with institutions and health workers gives an impetus to participation in welfare schemes. ● Overall participation in the JSY was quite satisfactory. Some progress has been made in terms of institutional deliveries and the presence of skilled persons at the time of child birth. However, concrete strategies need to be mapped out to take the leap towards meeting the targets under the MDGs on maternal and infant mortality. 	
D. CHILD HEALTH STATUS INDICATORS	Initiation of breast feeding Young children: feeding practices Immunisation
<ul style="list-style-type: none"> ● About half (45.5%) the children more than one year old were immunised against measles. ● A little more than half the women (60%) initiated breast feeding within half an hour of delivery. Contact with an institution promoted early initiation of breast feeding infants. ● Almost half (46%) the children less than six years old were underweight and around one-third (32%) of them were severely undernourished. 	
IODISATION OF SALT	Almost three-fourths (68%) of the salt samples obtained from households were optimally iodised.
E. HOUSEHOLDS' INTERACTION WITH FACILITIES	Awareness of mothers about anganwadi centres and their services
<ul style="list-style-type: none"> ● Awareness about anganwadi centres was good (96%) among the mothers of young children. More than half (60.5%) the women were aware that the AWC provided food for children. But relatively fewer women were aware of the other services offered by the AWC. Awareness about non-formal education provided to children was particularly low. ● Hardoi, where only 8.8% women mentioned antenatal care as an AWC service, ranked at the bottom in terms of women availing themselves of this service. 	