

Study on schemes of the health department for Maternal health and Newborn care in the state of Chhattisgarh, India

Public Health Resource Society¹

INTRODUCTION

Though India has made considerable progress on reducing MMR and NMR, the pace is not sufficient enough to achieve MDGs 4 and 5. Both maternal and child health can be taken care of by providing quality healthcare services and reducing out of pocket expenses. The launch of Janani Suraksha Yojana (JSY), has increased the number of institutional deliveries but has not adequately responded to various critical aspects such as referral transport, child care, emergency care, out of pocket expenditure such as user charges on medicines and diagnostic tests etc. In order to ensure better services for mother and child, Government of India started the Janani Shishu Suraksha Karyakram (JSSK) in 2011 from Mewat district of Haryana which was then expanded to the other states. The scheme aims to provide absolutely free and cashless delivery services in all the public health institutions. In its Report, the 6th Common Review Mission which was conducted in 15 states, hails JSSK as a big step towards perceiving health care as an entitlement within the public system.

The cashless provisions made available under JSSK are as follows:

- Maternity services from pregnancy up to 42 days, including caesarean delivery
- Newborn care up to 30 days after birth
- Drugs and diagnostic services
- Provision of blood transfusion
- Free diet for the mother during the stay at the hospital, 3 days in case of normal delivery and 7 days in case of caesarean delivery

¹ Financial support for the study has been given by Oxfam India

- Transport facility from home to facility and back drop after 48 hrs stay at hospital
- Referral transport to other facilities

However, studies on JSSK review its implementation in the states has been few. The current research was conducted in order to understand the functioning of JSSK and other schemes related to maternal health, in Chhattisgarh and to what extent it has been useful in fulfilling its objective of providing free maternal and child healthcare.

LITERATURE REVIEW

Studies

In the year 2005, more than 20% Maternal Deaths (Hogan et al, 2010) and more than 31 % Neonatal deaths (Rajaratnam et al, 2010) had occurred in India. Despite the gradual decrease of MMR and neonatal death rates, these actual numbers remain high. Chhattisgarh state has one of the poorest health indicators especially in terms of maternal and child health. As per sample registration Survey of 2011 Chhattisgarh had the Infant Mortality Rate of 48 as opposed to national average of 44. The Sample Registration System (2007-2009) put the Maternal Mortality Ratio at 269 as opposed to national average of 212.

To combat this issue of high IMR and MMR in the country in order to achieve its Millennium Development Goals, Indian government introduced the JSY scheme in 2005, a conditional cash transfer scheme for the purpose of incentivising institutional deliveries. In 10 high focus states (including Chhattisgarh) women are entitled to a monetary incentive of Rs. 1400 for delivery in a public institution or an accredited private institution. As per JSY guidelines of Chhattisgarh, the aim of the scheme is to promote safe and institutional delivery in order to lower the Maternal and Infant Mortality rates.

As in other parts of the country, this objective is implemented through the community health workers under NRHM called Mitnin in Chhattisgarh who are given a monetary incentive in rural areas for every institutional delivery they promote. Mitnin along with the ANM encourage women for ANC checkups, immunization of the infant, care for the infant etc to promote good healthcare on a holistic level.

Studies on JSY have consistently shown that though JSY led to an increase in institutional deliveries, it did not have an adequate impact on maternal mortality due to gaps in quality of services, inadequate ANC and PNC, and high out of pocket expenditure. The idea of the scheme is to enable the health facilities to provide free and quality services for maternal and new born care. It is to supplement the cash assistance of JSY ensuring access free-of-cost to public

healthcare facilities and aims at reducing the burden of out of pocket expenditure.

Previous studies on JSY have shown that even though the scheme has been able to make an increase in institutional deliveries significantly, that alone is not enough to lower the indicators like MMR.

This strengthens the case for a better and improved infrastructure and services in the institution. For the purpose of the same Janani Shishu Suraksha Karyakram was introduced in the year 2005 to make delivery in public institutions a cashless affair with access to all basic and emergency services. The idea is not only to provide improved institutional care during and post delivery but reduce the high out of pocket expenses incurred by the women even in government facilities. Regardless of any criteria every woman coming to a public institution is a JSSK beneficiary and entitled to absolutely free delivery and care for neonate.

The World Health Organization estimates that at least 88–98% of maternal deaths can be averted with timely access to existing, emergency obstetric interventions. A study conducted by Neetu Tripathi et al in the Urban Slums of Chandigarh found that there was no change in areas of ANC or indirect expenses as they were not covered by the scheme. However as a result of introduction of the scheme, OOP expenditure in areas of delivery in neo natal care was reduced to by almost 33 %. The Out of Pocket however continues to remain high despite the introduction of the scheme due to unavailability of drugs, medicines, diagnostic services etc. There remains a dearth of dearth of studies assessing and evaluating the scheme.

Scholars have repeatedly argued how Cash based Incentive alone for institutional delivery is not enough to reduce the MMR and have to be accompanied by strengthening and improving the quality of health care (Randive et al,2013a; Rai et al, 2012; Lim et al, 2010;Ved et al, 2013). The findings in a study by Lim et al (2010) showed that the proportion of institutional births

increased in a pre and post JSY phase by an average of 20% to 49% in five years but did not establish a significant association between institutional birth proportions and MMR. These studies push for “content and quality” of maternal care, instead of Skilled Birth Assistance at delivery alone a criteria of improved maternal care. (Hodgins S, 2011)

Randive et al (2013b) point out that merely increasing the coverage of institutional delivery alone is not enough to bring down the MMR rather quality based coverage of Institutional delivery is required. The study argues that a “gap exists between access to just Institutional Delivery and access to EmOC, possible indicating that mothers delivering in the institutions are not necessarily receiving appropriate or adequate care”. They find that “an association between MMR and effective coverage in the districts was stronger than with simple ID coverage”.

Knight et al (2013) point out in their study that “the five most commonly cited barriers were inadequate training/skills mix (86%); drug procurement/logistics problems (65%); staff shortages (60%); lack of equipment (51%) and low staff motivation (44%)”.

The NRHM guidelines state that “Both Maternal and Infant deaths can be reduced by ensuring timely access to quality services, both essential and emergency, in public health facilities, without any burden of out of pocket expense”. However as proved by various studies, higher Institutional Delivery is only one of the criteria in promoting a safe and better maternal health care as it is expected to maternal and neonatal health indicators through timely access to trained personnel, strong infrastructure and referral services in case when required.

The major reason for the same is because there exists a “disconnect between the quality of care theoretically expected of deliveries in ‘institutions’ and what was actually available in terms of clinical and supportive care in the institutions”(Ved et al, 2012).

Further in order to ensure free services at the public and empanelled facilities, the Chhattisgarh government introduced the Rashtriya Bima Swasthya Yojana and Mukhyamantri Swasthya Bima Yojana under which various packages for normal delivery, caesarean delivery and neo natal care can be utilized in public hospitals and RSBY/MSBY accredited private hospitals. The effectiveness of the same remains poor. Poor enrollment ratio of beneficiaries under the scheme, lack of awareness about the benefits leads to poor usage of RSBY and choosing of profitable packages by private hospitals reduces the effectiveness of the scheme (Dasgupta et al, 2013). Despite the fact that the Child Birth packages are the most used among hospitalization cases in women in Chhattisgarh, out of pocket expenditure remains high (Mishra et al, 2014; Nandi et al, 2013, Nandi et al, under publication).

As it is a more recently introduced scheme, there is a dearth of studies evaluating the effectiveness of JSSK. Therefore an evaluation of JSSK and other schemes related to maternal and neonatal care was attempted in Chhattisgarh in order to gauge as to what extent has the scheme been successful in providing effective and quality coverage of maternal health care and reduction in Out of pocket Expense.

Secondary data:

Below given are some basic Population statistics for the state of Chhattisgarh-

Table 1: Population Statistics of Chhattisgarh

Data		Source
Population (in thousands)	25540196	Census 2011
Female population % (in thousands)	12712281	Census 2011
Percentage of ST population	30.6%	Census 2011
Percentage of SC population	12.8%	Census 2011
TFR (SRS 2011)	3	http://jsk.gov.in
Sex Ratio	991	Census 2011
Child Sex Ratio	974	Census 2011
Age at marriage (Mean Age in Yr)	Male- 22.8 Female- 18.9	DLHS-3
Marriage less than 18 yrs	21.3%	DLHS-3
Percent literate Female Population (Age 7+)	60.59%	Census 2011
Percent literate Male Population (Age 7+)	81.45%	Census 2011
Percent girls (age 6-11) attending Schools	81%	NFHS-3
GDP	Rs. 129,718 crore 1.78% of India's GDP	2011*
Standard of Living Index		NFHS-3
% Lowest	39.6	
% Second	26.9	
% Middle	14.7	
% Fourth	8.7	
% Highest	10.2	
Unmet Need for family planning	Total-20.9, Urban-18.2, Rural- 22.5	DLHS-3

Table 2: Birth Rate and Death Rate

The birth and death rates in the state are higher than the national average and so is the natural growth rate.

	BIRTH RATE	DEATH RATE	NATURAL GROWTH RATE
INDIA	22.1	7.2	14.9
CHATT ISGARH	25.3	8.0	17.3

Source: SRS bulletin (2011)

Maternal Mortality Rate in Chhattisgarh is 269 as per SRS 2007-09 while IMR is 48 (SRS, 2011). In both these indicators, Chhattisgarh fares much worse than India's average.

Table 3: Public Health Facilities

Type of facility	Existing Number Of Facilities
SCs	5161
Civil dispensary	29
Urban PHC	31
PHCs	783
24*7 PHCs	
CHC	126
FRU	
Civil Hospital	14
District Hospital	27
MMUs	30
108/102 ambulances	206

Source: State HMIS data

Table 4: Public Health Infrastructure:

S.N.	Health facility	Sanctioned	Government Infrastructure	Under construction	Gap	Gap %
1	District Hospital	27	18	9	0	0
2	Civil Hospital	15	15	0	0	0
3	CHC	156	129	20	7	5 %
4	PHC	783	491	266	26	3 %
5	Sub-centre	5161	3182	1535	444	9 %

Data Source: State HMIS

Table 5: Status of Emergency Referral Transport in Chhattisgarh:

Number of Districts equipped with	Mobile Medical Units under NRHM	14	14	0
	Any other Referral service	22	45	23
Number of MMUs operational in the State/UT under NRHM		30	30	0
Total number of patients benefited by Mobile Medical Units (MMUs) under NRHM		215314	269483	54169
Total number of investigations conducted by Mobile Medical Units (MMUs) under NRHM		22168	31267	9099
Number of Emergency Response Services Operational in the State/UT Under NRHM	102-Type	0	214	214
	104-Type	0	1	1
	108-Type	206	206	0
	others (please specify)			0
	Total	206	421	215
Number of Ambulances functioning in the State/UTs under NRHM (At PHC/CHC/SDH/DH)				0
Total number of patients transported by	MMUs	NA	NA	NA
	ERS (108/102/104/other)	408109	485458	77349
	Any other Ambulances under NRHM	0	0	0
	Total	408109	485458	77349

Source: State PIP 2014-15

Table 6: Status of EMRI-108 Ambulances

In Bastar district there exists 14 operational EMRI-108 ambulances, with an average of one ambulance per 61192 of population. In Surguja fares the same with 14 operational ambulances with an average of one ambulance per 60978 of population. Mahasamund fares worse with 10 operational ambulances in the district and one ambulance per 103228 of population.

S. no.	District	Population 2011	No. blocks	No Operational Ambulance	Population/Per Ambulance
1	Balod	894690	5	10	89469
2	Baloda Bazar	1349884	6	12	112490
3	Balarampur	717069	6	10	71707
4	Bastar	856689	7	14	61192
5	Bemetara	664998	4	8	83125
6	Bijapur	241000	4	7	34429
7	Bilaspur	2662000	7	21	126762
8	Dakshin Bastar Dantewada	275040	4	6	45840
9	Dhamtari	799199	4	10	79920
10	Durg	1783387	3	18	99077
11	Gariyaband	551558	5	8	68945
12	Janjgir Champa	1620632	9	15	108042
13	Jashpur	863887	8	14	61706
14	Kabeerdham	822239	4	8	102780
15	Kondagaon	554754	5	10	55475
16	Korba	1206563	5	10	120656
17	Koriya	659039	5	10	65904
18	Mahasamund	1032275	5	10	103228
19	Mungeli	706000	3	6	117667
20	Narayanpur	140206	2	3	46735
21	Raigarh	1493627	9	15	99575
22	Raipur	2160718	4	15	144048
23	Rajnandgaon	1537520	9	17	90442
24	Sukma	249841	3	5	49968
25	Surajpur	790487	6	10	79049
26	Surguja	853697	7	14	60978
27	Uttar Bastar Kanker	748593	7	14	53471
	Chhattisgarh	26235592	146	290	90468

Source: State PIP 2014-15

The average no. of 108 beneficiaries for Bastar for the month of April to September have been 1110, while 957 for Mahasamund and 1266 for Sarguja for the same period.

Table 7: Number of Beneficiaries of 108- Transport Service

District	13- Apr	13- May	13-Jun	13-Jul	13- Aug	13- Sep
Balod	353	361	343	493	407	384
Balrampur	445	517	412	446	432	400
Bastar	1023	1185	957	1167	1175	1153
Bemetra	626	756	484	578	584	552
Bijapur	274	336	307	296	293	312
Bilaspur	1748	1929	1679	1931	1575	1376
Daksihn Bastar Dantewada	486	488	472	557	613	593
Dhamtari	651	765	665	731	725	749
Durg	1470	1566	1507	1585	1653	1765
Gariyaband	428	488	464	511	513	547
Janjgir-champa	1496	1623	1401	1613	1140	1186
Jashpur	733	951	777	814	574	610
Kondagaon	1012	1156	952	1003	1013	948
KORBA	1121	1234	1050	1171	947	1068
Koriya	651	766	653	801	507	528
MAHASAMUND	884	943	982	1018	985	931
Mungeli	401	450	374	397	442	333
NARAYANPUR	245	221	210	174	181	195
Raigarh	1210	1165	1174	1316	1178	809
RAIPUR	1684	1842	1552	1777	1856	1790
Rajnandgaon	1450	1757	1519	1645	1635	1334
Sukma	232	301	227	321	251	256
Surajpur	678	930	893	855	831	719
Surguja	1164	1370	1353	1395	1398	913
Uttar Bastar Kanker	887	1115	971	999	925	876
	22854	25891	22904	25091	23425	21788

Source: State PIP 2014-15

The total Operational 102 Ambulances in the state is 288. Surguja has 14 Operational 102 Ambulances, Mahasamund has 10 while Bastar has 13.

Table 8: Status of 102

Sl No	District	Launch Date	No of Ambulance Dispatched		
			Operational	Back Up	Total
1	Bilaspur	23-Aug-13	20	1	21
2	Raigarh	30-Aug-13	15	0	15
3	Koriya	2-Sep-13	10	0	10
4	Surguja	7-Sep-13	14	0	14
5	Bijapur	17-Sep-13	6	1	7
6	Kabeerdham	20-Sep-13	8	0	8
7	Dantewada	20-Sep-13	6	0	6
8	Jashpur	20-Sep-13	14	0	14
9	Balrampur	20-Sep-13	10	0	10
10	Rajnandgaon	21-Sep-13	16	1	17
11	Mungeli	21-Sep-13	6	0	6
12	Raipur	23-Sep-13	15	4	19
13	Surajpur	30-Sep-13	10	0	10
14	Sukma	30-Sep-13	5	0	5
15	Narayanpur	30-Sep-13	3	0	3
16	Janjgir - Champa	30-Sep-13	14	1	15
17	Balod	4-Oct-13	10	0	10
18	Bemetra	8-Oct-13	8	0	8
19	Durg	10-Oct-13	13	1	14
20	Bastar	11-Oct-13	13	1	14
21	Mahasamund	13-Oct-13	10	0	10
22	Kanker	13-Oct-13	13	1	14
23	Korba	13-Oct-13	10	0	10
24	Baloda Bazar	13-Oct-13	12	0	12
25	Kondagaon		10	0	10
26	Gariyaband		8	0	8
27	Dhamtari		9	1	10
			288	12	300

Source: State PIP 2014-15

METHODOLOGY

Study Aim

The aim of the study was to understand the status of maternal and newborn care schemes in the state of Chhattisgarh and use the evidence for advocacy in improving the services.

The specific objectives were as follows:

- To understand the current status of schemes related to maternal and neonatal health with regards to the provision of free entitlements for pregnant women and sick new born, in government health facilities. The schemes under study were JSSK, JSY, 108, and 102.
- To identify the constraints/challenges faced by the community in accessing these services
- To examine the areas where out of pocket expenditure is incurred while accessing the schemes and the reasons thereof
- To use the emerging evidence for advocacy in improving the scheme

Study Design

The study is a mix of quantitative and qualitative research. For the quantitative study, three districts of Chhattisgarh were selected on the basis of geographical location and profile; one each from north, south and central Chhattisgarh. The districts selected were Sarguja, Mahasamund and Bastar. Within each district two blocks were selected based on their distance to the district headquarters. One block being closer to district headquarter and one at the periphery.

The 48 villages chosen through systematic random sampling in these six blocks formed the study location where the respondents were identified and interviewed through an interview schedule.

Further, the District Hospital/Medical College from every district, six Block CHCs and two PHCs in every block were identified through purposive sampling once the quantitative data collection was over. All these facilities were visited for a facility survey.

Secondary data was collected by visiting the District Programme Management Units (DPMU) and the Block Programme Management Units (BPMU) to collect district and block level programmatic data on the beneficiaries of JSY, JSSK scheme, 102, RSBY, MTP and Family Planning services.

Table 9: Sampling

Unit	Details	Total Sample
Districts	Selected on the basis of geographical spread	3
Blocks	Two blocks in each district based on the distance from District HQ	6
Facilities	Two PHCs, One CHC in each block and One DH in each district (7 facilities in each district)	21
Villages	Systematic Random sampling from all villages in the Block; total 8 villages per Block	48
Individual interviews	Listing of all women with institutional/home delivery or cases with termination of pregnancy/still birth in last six months in selected villages. All of these women were eligible for individual interview (average of 11 per village)	511

Quantitative Data Collection

The quantitative study consists of interviews with the beneficiaries, i.e. women with institutional/home delivery or cases with termination of pregnancy/still birth in last six months in selected villages. All of these women selected for the quantitative individual interview. The selection of villages was made through following sampling process.

Sampling

The universe of the study is all women in the state who have delivered or had a terminated pregnancy on or post 1st February 2014.

Once the blocks were identified in every selected three district through purposive sampling after the villages were listed in ascending order as per population. Eight villages within each block were chosen as per systematic random sampling. In Bastar, two of the villages had to be replaced as they were deemed as difficult to access due to the political situation. Once the team reached every sampled village, listing of all eligible women with institutional, home delivery and cases with termination of pregnancy in last six months (1st February '14 onwards) was done with the help of the Mitnin or AWW. The attempt was to cover all the listed women; however not all of the 644 listed could be interviewed due to their unavailability. A total of 511 respondents were finally interviewed.

Sample Size:

Table 10: Sample Size

Districts	Selected blocks	Number of Villages covered	Number of Respondents covered
Sarguja	Lakhanpur	08	109
	Udaipur	08	78
Mahasamund	Bagbahra	08	97
	Saraipali	08	62
Bastar	Lohandiguda	08	61
	Tokapal	08	104
Total Sample	06	48	511

The women identified from the listing were interviewed in detail. This helped to identify barriers faced by the women who opted for home deliveries, access to ANC services and experience of women at the public and private facilities. In case of home deliveries, questions such as accessibility to public health facilities, reasons for home delivery, socio-economic status of the family, complications after home delivery, health of mother and child after delivery were covered along with expenditure incurred. Whereas in case of institutional delivery, experience at the hospital (public/private), services provided at the hospital (medical, transport, food etc), details on out of pocket expense, reasons for going to the particular hospital, problems faced, emergency care, maternity benefit entitlements were explored. Pregnancy related issues and ANC services were be explored with all women.

A structured interview schedule was used, brief description of which is given below, in order to understand the manner of achievement of objectives. The interview schedule was divided into sections from Part A to Part K.

Whereas Part A dealt with the general profile of the respondent, including demographic, social and economic characteristics, Part B dealt with History of Pregnancy.

The subsequent portions dealt primarily with the research objectives of the study over the assessment of the schemes for maternal and neo natal health.

Section C on Ante Natal Services makes a comprehensive assessment on the awareness about ANC services, registration of pregnancy, the number of Ante Natal checkups and the kind of services provided in every check up. Chhattisgarh government outlines this as the crucial step in its JSY guidelines to increase institutional delivery and bring more and more women under the ambit of JSY.

Section D explores the awareness among the respondents on JSY, JSSK, 102 service and the maternity entitlements under MGNREGA.

Section E deals with the outcome of delivery [birth (live or still) or miscarriage]. Subsequently, depending on the response, the questionnaire is split into separate sections for home delivery (Section F), institutional delivery (Section G) and miscarriage (Section H).

These three sections (home delivery, institutional delivery or miscarriage) dealt with the reasons for the same. It explored the situations regarding the provision of free entitlements under JSSK, and 102 services. Further it explores gaps where attempts were made in utilising the government provided services but could not be made use of due to various reasons. At the same time, usage of RSBY/MSBY insurance card among the respondents and out of pocket (OOP) expenditure is assessed.

In case of a birth, an assessment of postnatal services (Section I) and neo natal services (Section J), that the pregnant women are entitled to under JSSK are assessed.

The last section (K) tries to understand the implementation of JSY scheme and the gaps in it.

Once training was provided to the surveyors including hands-on demonstration, the interview tool was pilot tested in slum area of Jogi Nagar in Raipur. A team of surveyors undertook interviews, supervised by team members of PHRS, who have experience in such surveys. For the survey, eight surveyors and two supervisors were recruited. In one district, a set of two teams plus one supervisor collected data in both blocks simultaneously. During the data collection, supportive supervision was provided to the surveyors by the Research Coordinators and ensured that ethical considerations are taken care of.

Informed consent was taken verbally from the respondents and noted. Confidentiality has been maintained during data analysis and report writing.

Qualitative study

The qualitative study was undertaken by the Principle Investigator and Research Coordinators. A total of 16 Government health facilities were visited and data gathered about different dimensions directly related to maternal and newborn health care schemes. The qualitative information and facility survey have been categorized into 23 sub sections. Under the facility survey basic aspects and infrastructural facilities like availability and functioning of toilet, beds, equipments, human resource, medicines, lab & diagnostic facilities etc were covered. A checklist was prepared for this. Other data that was collected was related to total deliveries (Institutional/home), ANC registration, JSY & JSSK implementation, status of specific maternal, neonates and family planning services, availability and condition of operation theatre, labor room, toilet, equipments for delivery, lab services, availability of medicines, post partum unit, staff positioning, RSBY/MSBY packages for delivery, neonates, sterilization and MTP. Programmatic data from last six month (April to September 2014) was collected wherever available.

Health institutions were chosen depending on the load of deliveries and location as estimated by the quantitative data collection when respondents were interviewed from 48 villages of the chosen blocks. For this, the PI sent letters to the CMHOs, DPMs and BPMs of the respective districts requesting them for their support in the study. The Principal Secretary, Health and MD NHM were also

informed of this study. The PI and research coordinators firstly met the CMHO for permission and then contacted the District Programme Manager (NRHM). DH Mahasamund and PHC Khatti in Bagbahara block could not be surveyed due to the absence of staff. Some of the programmatic data collected was incomplete and it was not possible to analyze them.

Facilities studied:

Table 11: Facilities Studied

Name of the District	Primary Health Center	Community Health Center	District Hospital	Sub-Health Centre
Sarguja	Kunni	Lakhanpur	DH,	Dandgaon
	Kedma	Udaipur	Ambikapur	
Mahasamund	Khatti	Bagbahra		-
	Pathsindri	Saraipali		
Bastar	Chhaparbhanpuri	Lohandiguda	Mahrani Hospital Jagdalpur	Karanji
	Mardum	Tokapal		
Total facilities covered (16)	06	06	02	02

Desk Review

Documentary sources on the status of implementation of the various maternal and neonatal schemes were studied. District and Block level data was collected for the selected districts and blocks for data on number of beneficiaries under the various schemes were analysed with comparison between districts in the state. Secondary data was collected on various indicators of health status in Chhattisgarh.

Analysis and quality of data

For assuring quality of quantitative data, the Research Coordinator (RC) and Supervisors visited the field on a regular basis to assure quality of the data collection process. The RC validated 20% of the data herself. The quality checks included Investigators looking at 20% questionnaires of the household listing and checking for internal and other consistencies, completeness, and depth/quality of answers. The quantitative data collected were further coded and entered in formats designed under EPI data formats to minimize errors in data entry.

Data cleaning was performed post data entry thoroughly randomly going through the entered records. The parts of the records prone to error were then identified were gone through again by the research coordinators and corrected.

The final records were analyzed through use of SPSS packages and MS Excel.

The analysis of the qualitative data was done through description, classification and connection. Thematic analysis was undertaken. Under thematic analysis, data coded and categorized into themes and attempts was made to find relationships between themes or looking at the context of certain codes.

For credibility and validity of data, triangulation was undertaken. The sampling methodology also added to the validity of the study.

Limitations

The data that was accessed from the block and district level was incomplete and therefore comprehensive analysis across districts and blocks based upon this data could not be done. The period of data collection coincided with the festival Teeja during which women visit their maternal home. As a result, data collection in Mahasamund had to be postponed after a large number of respondents became unavailable.

Ethical Considerations

The study took ethical clearance from the Institutional Ethics Committee of PHRS. The State Government and district/block level health officials were duly informed of the study and their support requested.

The Institutional Ethics Committee of PHRS gave certain recommendations for the study. Considering the scope of the study, the Committee suggested that the title and objectives of the study should be modified to reflect that this is a study on the schemes of the health department related to maternal and neonatal care and not a study on all kinds of services for this group. The Committee suggested that a separate list of women who had a miscarriage should not be made as that may be a source of embarrassment for the woman. Only one list should be made in the village of all women who have been pregnant in the last six months (who are no longer pregnant). Thereafter a single questionnaire should be administered for home deliveries, institutional deliveries and miscarriages.

The Committee recommended that verbal autopsies need not be done as SHRC is already undertaking verbal autopsies of maternal and child deaths state wide under the community based monitoring initiative. The Committee suggested that the focus of the study should be the beneficiaries; their experience, perspectives and barriers. Discussions with other stakeholders and facility level study, if attempted, should be done only for triangulation of the findings and after analysis of the quantitative data. The Committee recommended that if during the course of the study, the team encounters any woman or child in acute distress, then all efforts must be made to extend necessary support for them to access health services. This has to be emphasized during the training of the surveyors. Information pamphlets for Janani Suraksha Yojana and Janani Shishu Suraksha Karyakram should be developed in the local language and distributed to the participants of the study. The study team strictly followed all the recommendations of the Committee during the data collection.

An Informed consent form was prepared and translated into the Hindi language. Surveyors read it out to the participants before starting the interview. Thereafter

verbal consent was taken from the respondent. Names of the respondent were masked to protect confidentiality and the name was not included in the data entry. Pamphlets with information on JSSK and JSY were distributed to the respondents and other community members. No case of current illness requiring medical attention was found among the respondents.

The results of the study will be shared with all the stakeholders, including the community and the Government. Due acknowledgement has been given to all persons (participants and others) involved in this research.

No risks were perceived to the respondents of the study. The study is expected to feed into improving the implementation of maternal health programmes thereby benefitting the respondents.

FINDINGS

Qualitative study

Facility Survey:

1. District level facilities

At the district level, two facilities were surveyed, i.e. Jagdalpur Medical College and Surguja District Hospital. Data could not be collected from Mahasamund DH as the researchers due to difficulty in accessing the concerned officials.

Infrastructure

The Jagdalpur Medical College hospital has 52 beds. A seven-bedded Post natal ward is there but it does not have its separate toilet or bathroom. There are separate wards for Normal delivery and Caesarean however three days post delivery all mothers are shifted to the normal ward. The hospital has Oxygen Cylinder and Autoclave for sterilization.

District hospital, Surguja is located in Ambikapur. It is a 368-bedded hospital. The average number of OPD patients in the last six months (April – September 2014) has been 23 per day while for IPD it is 17 per day. 91 beds are available in the gynaecology ward. Operation theatre is functional and is used for obstetric/gynecological purpose. In the Labour room, three Delivery tables, normal delivery kit, equipment for vacuum and forceps delivery, manual vacuum aspiration, IUCD insertion kit, oxygen cylinder and autoclave for sterilization were available.

Human resource

JMC has nine MBBS, 11 MD/MS, more than 140 Staff Nurses, ANMs and a Lab Technician. The specialists posted there include Anaesthetist, Gynaecologist, Surgeon, and Paediatrician.

In Surguja DH, the staff includes 20 Medical Officers, three MOs with MD, two PGMO Gynecologists, one Surgeon, two paediatricians plus three PGMO

pediatricians, two PGMO anesthetist, 51 staff nurses, eight ANMs and 14 lab technicians.

Services provided

ANC Services: In Jagdalpur Medical College, antenatal clinics are organized every Saturday and Tuesday, which are also the days kept for Immunization. All lab tests, along with stool test are also done. 627 women registered for ANC from April to September, 2014.

In Sarguja District Hospital, antenatal clinics are organized daily. Immunization is regularly conducted at district hospital. The total ANC registration was 750 between April and September 2014. 93 pregnant women received atleast 3 ANC checkups. Separate room was available during the ANC check-up, maintaining privacy.

Delivery: The average number of deliveries per month in Sarguja District Hospital (435) is higher than that in Jagdalpur Medical College (301) for the period of April to September 2014.

In both facilities, caesarean section is done. In Sarguja District Hospital, C-section constituted 21% of the total deliveries while in Jagdalpur Medical College, 19% of the total deliveries were through C-section. In JMC, Vacuum Delivery and Assisted Forceps delivery is also provided apart from Epistomy and Ceasearean.

Family Planning: In Jagdalpur Medical College, 271 women underwent Tubectomy (CTT and LTT) as compared to three men who underwent vasectomy in the year 2013-14. In the current financial year, from April 2014 to September 2014, 190 women underwent tubectomy as opposed to zero vasectomies conducted.

At the Sarguja District Hospital, 59 Laparoscopic sterilizations have been conducted in the last six months (April to September 2014.) along with 213 Minilap post partum sterilizations. A total of 593 IUCD insertion was reported, in which 469 was new IUCD insertion and rest 124 are in post partum IUCD insertion.

223 oral pills and 201 condoms distributed under the family planning services.

MTP: At Jagdalpur, 16 MTPs have been performed since April 2014 and while in Sarguja DH, 97 MTPs were conducted in the last six months (April to September 2014).

In both Jagdalpur and Sarguja DH, it was reported that treatment is available for gynecological disorders.

Neo Natal Care: In JMC, the Baby warmer in the neo natal care unit is not in a functional state so the baby warmer from the NRC is used. The resuscitator or incubator too is not present. Oxygen Cylinder and Autoclave are available.

Sarguja DH has a 24 hours functional SNCU (Special Newborn Care Unit) unit. There is a special MCH wing working in the DH. Equipments for newborn care like baby warmer, ambubag, incubator, resuscitator, thermometer, infant weighing scale etc were seen to be available in the District hospital.

Diagnostics and Blood bank/storage

In Sarguja DH, Blood bank, blood storage unit and facility for blood transfusion were available for 24 hours. Under the lab services blood, urine, stool and pregnancy test kit are available. Blood Storage Unit and Blood Transfusion Facility is available in JMC.

Medicines availability

In Sarguja DH, medicines like Magnesium sulphate, Oxytocin, Gentamycin, Ampicillin, paediatric antibiotics, Chloroquine, ACT and quinine were available. However, Misoprostol and gloves were not available.

Availability of JSSK entitlements

In JMC, according to the staff responsible for JSY payments as well as data reporting, JSSK scheme is available in the hospital which provides free diagnostics and drugs, and vehicle service. In Sarguja DH, under the JSSK it was

reported that free diagnostics and drugs, food, free pickup and drop facility (102/108) were available.

Complications and referral

In Sarguja DH, maternal and newborn deaths were documented. Between January to October, 2014, a total of 26 maternal deaths, 197 neonatal and 181 infant deaths were reported under the facility.

Cases with complications during delivery had not been documented separately, though it was reported that 30 Eclampsia cases were managed during delivery (April to September 2014). A total of 2460 live births, 65 still birth and 57 abortions (Spontaneous/induced) were reported during April to September 2014. During the same period, the hospital referred 13 women (and none of the newborn cases. 2057 women received post partum check-up within 48 hrs after delivery out of which nine women reported post PNC maternal complications. The hospital had not documented Malaria cases in pregnant women and new born separately, however, out of 4569 blood tests for malaria, 113 cases were detected positive.

For JMC, the data for Maternal mortality, neo natal deaths and referrals could not be collected.

Use of RSBY

In Sarguja DH, RSBY package was not used for normal delivery. RSBY was used in 21 C-sections, 29 neonatal cases and one LTT case between January and October 2014. The data on RSBY could not be collected for JMC.

2. Community Health Centers

Table 12: Data for six months (April to Sept 2014)

	Bastar District		Sarguja District		Mahasamund District	
Services provided	Lohandiguda	Tokapal	Lakhanpur	Udaipur	Saraipali	Bagbehera
Total no. of deliveries	329	*	614	407	58	396
Average deliveries per month	55	*	102	68	9	66
No. of C-sections	No service	No service	No service	No service	No service	No service
JSY payments	608	829	614	407	*	396
JSSK cases	332	260		*		
LTT	14	64	101	63	84 (including CTT)	
Vasectomy	5	2			0	
CTT						378
MTP	No service	12	4	0	No service	1

* Data could not be collected

ANC

ANC checkups and immunization sessions are held every Tuesday and Friday in Lohandiguda CHC. Since January there have been 267 women who have gone through ANC check up.

In Tokapal CHC, 161 women registered for ANC check up from July to September, which is fixed on Thursdays. Blood, Urine and pregnancy test are done. There is no facility for Stool test.

In Saraipali CHC, routine tests like blood test, urine test and pregnancy test are available however for stool test the samples are sent to Raipur. The old hospital building in the city is the place where immunization camp is held every Tuesday.

Delivery

Deliveries are conducted in all CHCs, however in none of the CHC of Lkhanpur, Udaypur, Saraipali, Bagbahara, Tokapal, Lohandiguda is C-section conducted. The average deliveries per month is highest in Lakhanpur CHC (102) followed by Udaipur CHC (68) and Bagbahra (66).

In Saraipali CHC, only the facility for normal delivery is available since epistomy too has been discontinued in the CHC. There is no blood storage unit or blood transfusion facility. Autoclave for sterilization is not available so the boiler is used to sterilize the delivery instruments.

JSSK

JSSK entitlements, like food twice a day, diagnostics and drugs and pick up and drop back facility, were reported as being available in Lohandiguda, Lakhanpur, Udaipur, Bagbahra and Tokapal CHCs. JSSK services are not available at Saraipali CHC.

Family Planning

In Lohandiguda CHC, There is none of the doctors posted are able to conduct CTT or LTT. A specialist from Jagdalpur undertakes the operations when 'camps' are organised. However, vasectomy is performed by a MBBS in the operation theatre of the CHC. Since April, there have been 14 laparoscopic sterilizations as opposed to 5 vasectomy in the same period. IUCD facility is also available.

In Tokapal CHC the Operation Theatre is used for VT and LTT. From April to September there have been 64 Laparoscopic Sterilizations as opposed to 2 vasectomies. IUCD insertion Kit too is present and made use of.

Lakhanpur CHC reported 101 LTT, 33 IUCD and only one PPIUCD cases. Treatment is available for gynecological disorders like leucorrhoea, menstrual disorder etc.

In Udaipur 63 LTT cases were reported in the last six months. Treatment was available for gynecological disorders like leucorrhoea, menstrual disorder etc.

In Saraipali and Bagbahra CHCs, CTT and IUCD services are provided. Treatment for gynecological disorders are available at Bagbahra.

MTP

In Lohandiguda CHC, MTP is not conducted in the CHC because of lack of trained personnel.

Facility for MTP available at Lakhanpur CHC, and four MTPs have been conducted in the last six months.

Facility for MTP is available at Udaipur CHC, but there have been no cases in the last six months.

MTP facility is available in Bagbahra CHC while it is not available in CHC Saraipali. However, only one MTP was conducted in the last six months in Bagbahra.

Neo Nate Care

In Lohandiguda CHC, there was equipment available for new born care, like Ambubag, baby Warmer, weighing scale and thermometer but there is no resuscitator.

In Tokapal CHC, equipments for neo natal services, like baby warmer, Ambubag, thermometer and infant weighing scale are available. However incubator and resuscitator are not available. Oxygen Cylinder and Autoclave too is available.

In Saraipali CHC equipments for neo natal care like Baby Warmer, Ambubag, weighing scale are available.

In Bagbahra, CHC, in the last six months, a total 109 low birth babies (< 2.5 kg.) were managed at the facility. Equipments for newborn care like baby warmer, ambubag, incubator, thermometer, and infant weighing scale were available.

Availability of Medicines

Medicines like Magsulf, Oxytocin, Gentamycin, Ampicillin, Paracetamol, Pediatric antibiotics, ACT, Quinine, and Chloroquine were found to be available in Lohandiguda CHC. However, Misopristol was not available.

In Tokapal, Medicines like Oxytocin, gentamycin, Ampicillin, Paracetamol, Pediatric antibiotics, ACT, Quinine, Chloroquine are available in the CHC, while Misopristol and Magsulf are not available.

In Lakhanpur CHC, all these medicines were available, while in Udaipur CHC, stock of Magnesium Sulfate and Misoprostal had recently finished.

In Saraipali CHC, Magsulf, ACT, Quinine or Misopristol were not available however other medicines like Gentamycin, Ampicillin, antibiotics and chloroquine were found to be available.

Infrastructure

There are six beds in Lohandiguda CHC and it has a functional toilet. According to the hospital staff, it is ensured that all delivery cases are made to stay for at least a day unless they give in written that they want to leave. Labour Room is equipped with two delivery tables and six normal delivery kits. Only normal deliveries and epistomy are carried out. Oxygen Cylinder, auto clave and steriliser are also available. There is a Post Partum Ward with six beds, which is used post delivery, and for immunization purposes.

Tokapal CHC has a capacity of 16 beds. All the delivery cases are ensured that the women stay for atleast two days. There is no functional toilet. Labour Room which has two delivery tables is used for normal delivery and epistomy only. Operation Theatre is used for VT and LTT. The Post Natal Ward has seven beds but has no functional toilet.

Lakhanpur CHC has a total of 30 beds in the wards.

Saraipali CHC is located five kilometres away from the block town. In the CHC, labour Room is available but is infrequently used for deliveries. Operation Theatre is available and is used only for Tubectomy. Oxygen Cylinder and

Autoclave are available too. NRC is not functional due to shortage of staff. There is no functional toilet in the hospital.

Bagbahra Community Health Centre is a 30 bedded hospital. Operation theatre is available but it is not used for obstetric/gynecological purpose. Labour room is available and used for delivery purposes. Delivery tables, normal delivery kit, IUCD insertion kit, oxygen cylinder and autoclave for sterilization were available. Equipment for vacuum and forceps delivery and manual vacuum aspiration were not present. Blood bank, blood storage unit and facility for blood transfusion were not available. Under the lab services blood, urine tests were offered but not stool test.

Human Resource

The Lohandiguda CHC doesn't have a Gynaecologist, Surgeon or a paediatrician. The MBBS doctors are supported by the RMA, ANMs, Staff Nurses and Lab technician.

In Lakhanpur CHC there are four Medical officers (three MBBS and one AYUSH), one RMA, seven staff nurses, two ANMs and two lab technicians.

In Udaipur, there is a Pediatrician, an Anesthetist, and three Medical officers (MBBS). Along with them there is one RMA, four staff nurses, two ANMs and three lab technicians.

There are six MBBS doctors at Saraipali CHC. One of them is trained for performing Tubectomies. They are supported by eight staff nurses, two ANMs and two Anaesthetists. There is no gynecologist posted.

There are five Medical officers (MBBS), five staff nurses, one ANM and three lab technicians at Bagbahra CHC.

Complications and referrals

From Lohandiguda, the cases of gynecological disorders are referred as there are no trained/qualified personnel/Gynecologist to look after them. According to hospital staff there has not been any maternal death since January but there has been a case of a neo natal death. Since January there have been 121 complicated

delivery cases, who were referred. Apart from that 15 babies and 5 mothers were referred post delivery. These referrals were all documented.

In Tokapal CHC Treatment for Gynecological disorder is available. Since January there have been 28 cases where the neonate has been referred and 76 mothers delivered with complications. The data for Maternal and neo natal deaths could not be collected.

In CHC Lakhanpur, between April and October 2014, four newborn deaths were reported but no maternal deaths were reported. They reported three PPH and one Eclampsia cases. Obstructed labour cases are referred to the district hospital. Between April and October 2014, 13 women and one newborn were referred.

Udaipur CHC had documented eight malaria positive cases among pregnant women. In the last seven months (April – October 2014), one maternal death was reported while no newborn deaths were reported. They reported three PPH and five Eclampsia cases. In the last seven months they had referred a total of 49 delivery cases to the district hospital.

In Saraipali, the low birth babies are managed at the hospital itself or referred to District Hospital. There has been no reporting of maternal deaths in the area for as long the hospital staff could remember. Neo natal deaths are not documented by the hospital. There were no reported cases of complication since February. For gynecological disorders, primary treatment is given at the hospital and more complicated cases are referred. There have been three such cases since February.

In Bagbahra, in the last seven months (April – October 2014) one newborn death was reported under the CHC, while no maternal death was reported. They reported one PPH case, which they managed during the time of delivery. In the last seven months (April – October 2014) the CHC has referred a total of 32 cases out of which most (31) were women and one newborn.

Use of RSBY

From April to October 2014, in Lakhanpur CHC, seven women have used RSBY for normal delivery and 44 for sterilisation.

In Udaipur CHC, RSBY was used for normal delivery in 30 cases and for six sterilization cases April – October 2014.

In Saraipali CHC, under RSBY packages, only dog bite and Conventional Tubectomy has been used. Since January there have been 99 cases where dog bite package was used and 149 where Conventional Tubectomy package was used.

In Bagbahra, RSBY was not used for normal deliveries, however, 52 sterilization cases were covered under the RSBY from April to October 2014.

Blood storage

Blood storage or Blood Bank facility is not available at Lakhanpur, Saraipali, Lohandiguda and Tokapal CHCs. In Bagbahra and Udaypur CHCs, equipments were available, but blood storage unit had not yet started.

3. Primary Health Centers

Deliveries

Chhaparbhanpuri PHC is a non 24*7 PHC with an average of 1.8 deliveries per month. There have been 17 deliveries from January to 15th October 2014.

In Mardum PHC (non 24*7 PHC), the average number of deliveries from January to September have been three per month.

Kunni is a type-A PHC (24*7) located in rural area of Lakhanpur block of Sarguja district. It is a 24*7 functional PHC. In the last seven months, (April to October 2014) the average OPD monthly has been 885 while average monthly IPD has been 37. The average number of deliveries conducted (April to October 2014) has been 23 per month.

Kedma is type- A PHC of Udaipur block of Sarguja district. It is listed as a 24*7 functional PHC. In the last six month, a total of 26 deliveries have been conducted.

Pathsindri PHC, though listed as a 24*7 PHC, has been in quite a non-functional state ever since the doctor who was posted, left to complete his MD. As a result, there have been no deliveries in the PHC since he left. The doctor has joined back in August, 2014, however, he is a visiting doctor to Saraipali CHC. There is an SHC in Pathsindri where all the deliveries are conducted. The IPD service has started in the PHC only recently from August (after the doctor assumed office) and since 1st August, 36 IPD cases were reported.

JSSK

JSSK is not functioning in Chhaparbhanpuri PHC, Mardum PHC and Pathsindri PHC.

In Kunni PHC, under the JSSK entitlement, free diagnostics and drugs were available, but not food. Free pickup and drop facility (102/108) is not available in PHC but comes from CHC Lakhanpur when called.

In Kedma, free diagnostics and drugs were available, but not food. Free pickup and drop facility (102/108) is not available in PHC but vehicle comes from CHC Udaipur at the time of need.

ANC Services

In Chhaparbhanpuri PHC, Ante Natal Clinics are organised every Wednesdays, the exception being when the RMA is not available. Facilities are available for Urine Test, Blood test and Rapid Test for Pregnancy. Stool test is not conducted. In Mardum PHC Ante Natal Clinics and immunization sessions are organised on Tuesdays. Except for stool test all other tests are performed.

In Kunni PHC, antenatal clinic is organised on the fourth Thursday of every month. A separate room is not available for ANC but some amount of privacy is maintained by curtains during ANC checkup.

In Kedma PHC, ante natal clinics are not organized regularly.

In Pathsindri PHC, antenatal clinics are organised every Saturday. However, for Lab tests for ANC or otherwise, people are sent to Saraipali along with samples. The PHC does not have stocks of rapid pregnancy kits.

Family Planning

In Chhaparbhanpuri PHC oral pills and IUCD are available. Since February there have been two cases of IUCD insertion. However no oral pills were distributed in 2014.

Mardum PHC does not have IUCD insertion kit. The one in SHC Mardum is used. Since January, two women have availed of the IUCD, which is inserted by the ANM.

In family planning services, Kunni PHC reported that LTT camps are organised every year in December. Last year (Dec 2013) a total 33 LTT cases were operated on.

In Kedma PHC, they reported that LTT camps organize every year in December, however, could not provide any data for the same.

No services for family planning, including distribution of oral pills or condoms are provided in Pathsindri PHC.

Neo Nate Care

In Chhaparbhanpuri PHC equipments for neonates like Ambubag, thermometer, Infant weighing scale are available.

Mardum PHC, Kunni PHC and Kedma PHC have equipments for neo natal care like thermometer, Ambubag and Infant Weighing Scale though they don't not have baby warmers.

In Kunni PHC, some cases of low birth weight babies are managed at the facility itself while other cases are referred to CHC/district hospital. In Kedma, they refer all such cases to higher facility.

Only an infant weighing scale is present in Pathsindri PHC but no baby warmer or Ambubag.

Human Resource

In Chhaparbhanpuri PHC there is an AYUSH MO, RMA, Staff Nurse, ANM, an Ophthalmic assistant, one AYUSH pharmacist and one allopathic pharmacist.

Mardum PHC has an AYUSH MO, RMA and ANM and Lab technician.

In Kunni PHC, one Medical officer (MBBS) is appointed but he is on leave for completing his MD. The current staff consists of one RMA, one AYUSH MO, two ANMs and one lab technician. There are no staff nurses.

In Kedma PHC, one MO (MBBS), one RMA, one AYUSH MO, two ANMs and one lab technician are appointed.

In Pathsindri PHC, there is one specialist doctor who is an MD and one ANM.

Infrastructure

The sub center in Chhaparbhanpuri is next to the PHC and the delivery cases are shared by it. When delivery cases come to the PHC, the SHC staff attends to them. The Labour Room is in the SHC Chhaparbhanpuri, There is one bed in the PHC is for non delivery IPD cases and the Labour Room is in SHC, which exclusively takes care of the delivery cases. It has a delivery table and also has an oxygen cylinder. The PHC or SHC do not have a functional toilet.

There are three beds in Mardum PHCs but since night stays or admissions do not happen, it is used by one of the hospital staff for accommodation. There is no water facility in the PHC and the staff admits that they avoid admitting the patients, delivery or otherwise, because of the same reason. Referrals are made in case the patients are required to be admitted. According to the hospital staff the PHC doesn't see much cases as because of good road connectivity and availability of free transport (102) facility, people from the nearby villages prefer to go to CHC Lohandiguda. Labour room is available where normal deliveries and epistomy are carried out.

In Kunni PHC, there are five beds available amongst which four beds are kept for general patients and only one bed is kept exclusively for women. Toilet facility is available for women in the labour room. Operation theatre is available but not used for obstetric/gynecological purpose. It is used only for LTT operations. Labour room is available and used for delivery purpose. Delivery tables, normal delivery kit, IUCD insertion kit, equipment for vacuum and forceps delivery were present, however, oxygen cylinder and autoclave for sterilization were not available. High risk pregnancy and C-section cases are referred to CHC/district hospital. Under the lab services blood test, urine test facility are available, but not stool test.

In Kedma PHC there are four beds and toilet is available for women at the labour room.

In Pathsindri PHC, labour room is available. Epistomy is also carried out whenever required however there is no IUCD insertion kit. Operation Theatre is in a non functional state.

Medicines

In Chhaparbhanpuri PHC, Oxytocin, Gentamycin, Misopristol, Ampicillin, Paracetamol, Pediatric antibiotics, ACT, and Chloroquine were found to be available. However quinine is not available.

In Kunni PHC, ACT for malaria and Misoprostol were not in stock. Similarly, in Kedma PHC, Magsulph, Misoprostal and ACT were not in stock since the last two months.

Pathsindri PHC doesn't have Magsulf, Misopristol and Oxytocin but has medicines like Gentamycin , Ampicillin, Paracetamol, ACT, quinine.

Complications and Referral

According to hospital staff of Chhaparbhanpuri PHC, there have been no known cases of maternal death since five years. The last neo natal death case was in January 2014. Since January there has been one complicated case due to anemia, which was referred.

In Mardum PHC, one case of malaria during pregnancy was reported. The woman later delivered in the PHC. No cases of maternal or neo natal death in past six months have been reported. Gynecological disorders are treated by the AYUSH doctor in the facility. And in case of major complications, women are referred to District Hospital Jagdalpur. Complicated cases and cases of referral are not documented however the staff said that there have been four cases of complications in the past six months, all of whom were referred.

In Kunni PHC, treatment is available for gynecological disorders however, for MTP, they refer patients to CHC Lakhanpur. In the last six months, no maternal deaths were reported but two newborn deaths were documented. They reported four complicated delivery cases, in which one was Eclampsia case. In the last six months, they have referred four delivery cases and four new born cases to the CHC and district hospital.

From Kedma PHC, for MTP, they refer patients to CHC Lakhanpur. Though they do not document Malaria cases in pregnant women separately, they reported

that 17 out of 75 blood smears were found positive from April to October 2014. Maternal or newborn death was not reported in the last seven months (April to October 2014). In the last seven months (April to October 2014) they referred a total of 14 delivery cases to the CHC and district hospital.

In Pathsindri PHC, in case of gynecological problems the patients are referred to CHC Saraipali. No cases of maternal deaths or Neo Natal deaths have been reported this year

4. Sub Health Center

Karanji Sub Center:

The Sub health Center in Karanji Village of Tokapal block was chosen as it sees quite a high load of deliveries. The total number of deliveries since January 2014 has been 30.

The center has two ANMs. According to the ANM, deliveries are also conducted at night. Delivery cases late at night are handled by the ANM who is called on phone from Jagdalpur.

Antenatal Clinics are organized by once in a month though not on a fixed day. Lab services are not available in the SHC and the samples are sent to CHC Tokapal. The Rapid test for pregnancy is available in the SHC. Since January 35 women had registered for ANC. Tuesdays are kept for immunization process. The SHC doesn't have any equipment for the care of neo nates except for a thermometer. The medicines available include Oxytocin, Gentamycin, Ampicillin, Paracetamol, Pediatric antibiotics, ACT, and Chloroquine. However quinine, Magsulf and Misopristol are not available.

There is one bed in the facility. Except for Normal Delivery Kit and the IUCD Insertion Kit no other equipments were available . The Autoclave for sterilisation was in a non-functional state.

According to the ANM, malaria cases in pregnant women are not documented as there have not been any such reported cases. Similarly there have been no reported cases of maternal or new-born deaths in the region. Since January there have been three cases of referral for mothers and new born. However there is no documentation of the same. For any gynecological problems or in case of a possible C-section, the patients are referred to CHC Tokapal or Medical College Jagdalpur.

Dandgaon Sub Center:

The Sub health Center in Dandgaon located in rural area of Udaipur block of Sarguja district. According to the ANM, cases are attended to at the facility 24*7. The total number of deliveries since April to October 2014 was 45, which gives an average of around 07 deliveries per month. All the IPD cases have been the same as the delivery cases. Antenatal Clinics are not organized on a fix day and women come to ANMs home at any time for the check up. A total of 53 women registered for ANC (April to October 14). For any gynecological problems or in case of C - section, the patients are referred to CHC or District Hospital. Tuesdays are kept for immunization. Lab services not available in the SHC and the samples are sent to CHC Udaipur. The Rapid test for pregnancy was available in the facility. Except for Normal Delivery Kit and the IUCD Insertion Kit no other equipments were available. Malaria cases in pregnant women were not documented separately. The SHC doesn't have any equipment for the care of neonates except for a thermometer. From January to October 2014, three delivery cases had been referred to CHC Udaipur & DH, Ambikapur.

Quantitative study

Profile of the respondents

511 women respondents were interviewed in the survey who had delivered or had undergone a terminated pregnancy in last six months. The age of these respondents ranged from 17 to 40 with the average age being 24 years. More than two thirds (69 %) of the women fell in the age category of 20 to 25 years. One fifth of them belonged to the age category of 26-30. Four percent of the women were below 19 years of age.

One fifth of these (21 %) responded to having been married before the age of 18 years, while 78 percent said they were married at 18 years and above.

In the three districts combined, more than half of them belonged to ST category (53 %), followed by SC (35 %) and OBC (9%). Three percent of the respondents belonged to General caste. However this was accompanied by inter-district variation in Caste/Tribal Status. In Bastar 71 % of the respondents fell within ST status with next largest category being OBC (14 %). In Mahasamund more than half of the respondents were OBC (53 %), followed by ST (35 %). In Surguja ST had half the share (51%) followed by OBC (37 %).

With respect to educational status, 37 % of the respondents were not literate while 16 % had studied up till primary school. 4 % of these were literate though had never been to school.

The major source of income in these districts is agriculture (57 %) on own land followed by daily wage labour (33 %).

The median value of the 66% of all respondents who owned and also knew the amount of land they owned was 2 acres while the average was 2.8 acres.

Of 337 people who had an estimate of the amount of land owned, 109 (32 %) had at least some part of their land irrigated.

Table 13: PROFILE OF THE RESPONDENTS (n=511)			
Indicator		N	Percent
Age of Respondents	<19 yrs	19	4 %
	20-25 yrs	352	69 %
	26-30 yrs	103	20 %
	31-35 yrs	28	5 %
	36-40 yrs	5	1 %
	Don't know	4	1 %
Age at Marriage	<18 yrs	105	21%
	18 yrs	208	41 %
	19-25 yrs	190	37 %
	26-33 yrs	4	1 %
	Missing	4	1 %
Caste/Tribe Status	ST	270	53 %
	SC	177	35 %
	OBC	45	9 %
	General	15	3 %
	Missing	3	1 %
	Don't Know	1	0
Literacy Status	Non-literate	190	37 %
	Studied till 5 th	81	16 %
	Studied till 8 th	105	21 %
	Studied till 10 th	61	12 %
	Studied till 12 th	36	7 %
	Graduate	11	2 %
	Post- Graduate	4	1 %
	Literate but never went to school	21	4 %
	Others	1	0
	Missing	1	0
Major Source of Income	Agriculture on own land	291	57 %
	Daily Wage Labor	167	33 %
	Self-Employed	22	4 %
	Government/Private Paid Employed	18	2 %
	Skilled Worker	9	1 %
	Others (includes NTFP Collection)	3	2 %
	Missing	1	0

Pregnancy History

For the respondents, the average number of children (including the current one) was calculated as two while the average number of times (including the current one) the respondents had been pregnant, is 2.4.

For 32 percent of the respondents, the current pregnancy was their first pregnancy while for 31% it was their second. For 17 percent it was their third and for 11 percent it was their fourth pregnancy.

Table 14: Order of Pregnancy of Respondents

No. of pregnancy	n	%
First	164	32
Second	156	31
Third	85	17
Fourth	58	11
Fifth	32	6
Sixth	5	1
Seventh	7	1
Eight	2	0.39
Nine	1	0.19
Total	510	100

Missing=1

The respondents were asked about the outcome of their previous pregnancies. Of the respondents, 19 (4%) had delivered a stillborn baby in the past, while 55 (11%) of the women had experienced a miscarriage.

Access to other Schemes

Public Distribution System

Under the Chhattisgarh Food Security Act, 2012; Pink and Blue Ration Card Holders have the monthly entitlement to 35 kg of rice at the rate of Re. 1 and 2 kg of iodized salt. Apart from that, 2kgs of Black Gram (in Scheduled Areas) and Pulses (for non- Scheduled Areas) at subsidised rates of Rs. 5 and Rs. 10 per Kg.

A little more than four fifth (84 percent) of the respondents had a Ration Card with least inter district variation. Overall, 14 percent of the respondents held Pink (Antyodaya) ration card, with inter district variation ranging from four percent in Mahasamund to 30 percent in Bastar.

Mahasamund had the largest percent of Blue Card (Priority) Holders (94 percent) followed by Surguja (90 percent) and Bastar (69 percent).

Only 1 percent in the three districts held a brown ration Card under which the beneficiary is entitled to 15 Kg of rice at Rs 9.5 per Kg every month and other cereals at not more than half their Minimum Support price.

Table 15: Possession of Ration Card

	Surguja(187)	Mahasamund(158)	Bastar(166)	Combined(511)
Have a Ration card (%)	83	87	82	84
Do not have Ration card (%)	15	13	18	16
Applied, haven't received(%)	2	0	0	0

Table 16 : Type of Ration Card

	<i>Surguja(156)</i>	<i>Mahasamund(136)</i>	<i>Bastar(134)</i>	<i>Combined(426)</i>
<i>Brown (%)</i>	1	2	1	1
<i>Blue/Pink (%)</i>	99	98	99	99

RSBY/MSBY SMART CARD

Rashtriya Swasthya Bima Yojana was introduced in 2008 in Chhattisgarh for BPL families (not more than five family members) to provide health cover and security against catastrophic health expenditure, with a monthly cap of Rs. 30,000 per year. In the year 2012, Mukhyamantri Swasthya Bima Yojana was announced which extended RSBY cover to non-BPL families in the state.

RSBY Card Holders (56 %) formed a major share in Mahasamund and the least in Surguja (22%). In Surguja 60% of the cardholders held an MSBY card and 22 percent held RSBY card. Interestingly, 16 % of the respondents did not know the type of card they owned.

Further a two fifth of the respondents admitted to not knowing the active status of card, while the other 17 had card which is not active.

Table 17: Possession of Insurance Smart Card

	<i>Surguja(n=187)</i>	<i>Mahasamund(n=158)</i>	<i>Bastar(n=166)</i>	<i>Combined(511)</i>
<i>Have Bima Smart Card(%)</i>	52	45	51	50
<i>Do Not have Bima card(%)</i>	48	55	49	50

Table 18: Type of Insurance Card

	<i>Surguja(n=97)</i>	<i>Mahasamund(n=71)</i>	<i>Bastar(n=85)</i>	<i>Combined(253)</i>
<i>RSBY(%)</i>	22	56	51	41
<i>MSBY(%)</i>	60	35	31	43
<i>Don't know the type of card (%)</i>	19	8	19	16

Table19: Active Status of Bima Card

	<i>Surguja(n=97)</i>	<i>Mahasamund(n=71)</i>	<i>Bastar(n=85)</i>	<i>Combined(253)</i>
<i>Active(%)</i>	38	49	41	42
<i>Not active(%)</i>	28	7	12	17
<i>Don't know(%)</i>	34	44	46	41
<i>Others(%)</i>	0	0	1	0

Maternity Allowance under MNREGA

Under the entitlements for women who have delivered a child and have worked at least for 15 days the previous year under MGNREGA, the women are entitled to a Maternity Allowance equivalent to 30 days wages (close to Rs. 5000). Of the respondents, 95 % of women had not received the allowance. The major reasons for it were that the respondents hadn't worked at all or had worked for less than fifteen days under MGNREGA or they were not aware of the scheme (33 per cent). Many of them didn't have a job card too.

Table 20: Maternity Allowance under MGNREGA(n=509)

	<i>Surguja(186)</i>	<i>Mahasamund(157)</i>	<i>Bastar(166)</i>	<i>Combined (509)</i>
<i>Received(%)</i>	3	4	7	5
<i>Not Received(%)</i>	97	96	93	95

Table 21: Reasons for not receiving the Maternity Allowance

	<i>Surguja(178)</i>	<i>Mahasamund(149)</i>	<i>Bastar(158)</i>	<i>Combined(485)</i>
<i>No information (%)</i>	31	31	38	33
<i>Applied but haven't received yet (%)</i>	7	8	6	7
<i>Didn't work for 15 days last year (%)</i>	32	46	45	40
<i>Others including not having a Job Card (%)</i>	30	15	11	20

Integrated Child Development Services

One of the six specified objective of ICDS is to provide free Supplementary Nutrition to pregnant mothers, mothers of children below six month of age through Anganwadi centers. The THR is usually provided once a week to the pregnant and lactating women. In the study it was found that 76 percent of women were receiving dry rations once a week, however, 18 percent said the ration is provided twice to thrice a month. The situation of THR provision was found to be better in Sarguja than in Mahasamund and Bastar.

Table 22: Status of Take Home Rations to the respondents

	<i>Surguja(182)</i>	<i>Mahasamund(158)</i>	<i>Bastar(166)</i>	<i>Combined(506)</i>
<i>Once a week(%)</i>	81	73	74	76
<i>Twice or thrice a month(%)</i>	14	24	16	18
<i>Once a month(%)</i>	1	1	7	3
<i>Do not get every month(%)</i>	0	1	0	0
<i>Not at all(%)</i>	2	1	2	1
<i>Didn't want to take(%)</i>	3	1	2	2
<i>Total</i>	182	158	166	506
<i>Missing</i>	5	0	0	5

Awareness on JSSK entitlements

The respondents were asked about their awareness regarding the various JSSK entitlements during pregnancy, childbirth and for neonatal care. The entitlements that the women knew about the most were those of free medicines and free delivery. However, the proportion of women who knew about these entitlements for pregnancy and delivery was less than half and in case of neonates it was one fourth (Table:). Very few respondents knew of free blood, diagnostics and referral transport.

Table 23 : Awareness on various JSSK entitlements (multiple responses)

JSSK entitlements (% of cases)	For pregnancy (n=505)	For delivery (n=507)	For neonates (n=494)
Free medicines	45	46	25
Free delivery/ treatment	42	45	15
Free conveyance to hospital	20	44	6
Free conveyance from hospital to back home	17	37	10
Free food/ money on lieu of food	11	15	3
Free blood	7	5	3
Free diagnostics/sonography	4	2	2
Free referral conveyance	2	2	1
Don't know	45	39	69
Others	2	2	3
Total	194	237	137

Ante Natal Care

All 511 respondents were asked questions regarding their ante-natal care (ANC). Nearly two-thirds (70 percent) of the women said that they received information regarding ANC from the Mitantin (ASHA) (Table:). Around one fourth each received the information from the ANM or Anganwadi worker.

Table 24: Source of information regarding ANC (multiple responses)

Source of information	<i>N (n=509)</i>	<i>% of cases</i>
Mitanin	357	70
ANM	109	21
SHG members	6	1
Anganbadi Worker	135	27
Govt doctor	13	3
Private health provider	13	3
Self	29	6
Family member/friends	47	9
Dai	2	0
No one informed	47	9
Others	5	1
Total	763	150

Non response- 2

Details regarding the total number of ANC visits were documented. It was found that eighty women (17 per cent) had less than three ANC visits (Table:). Eight out of them did not have a single ANC visit. When we calculate the ANC visits district wise we find that the proportion of women who had less than three ANC

visits, was highest in Sarguja (28 per cent) followed by Bastar (13 per cent) and Mahasamund (4 per cent). The average number of ANC visits was four for Bastar and Mahasamund while it was three for Sarguja.

Table 25: No. of ANC visits by women district wise

No. of visits	Sarguja		Mahasamund		Bastar		Combined	
	n	%	n	%	n	%	n	%
0	3	2	1	1	4	2	8	2
1	10	5	1	1	7	4	18	4
2	39	21	5	3	10	6	54	11
3	67	36	35	22	39	23	141	28
4	28	15	52	33	49	30	129	25
5	25	13	37	23	24	14	86	17
6	5	3	17	11	18	11	40	8
7	5	3	5	3	10	6	20	4
8	3	2	5	3	3	2	11	2
9	0	0	0	0	2	1	2	0
Missing	2	1	0	0	0	0	2	0
Total	187	100	158	100	166	100	511	100

The main reason (58 percent) for having less than three ANC visits was that woman had no information about the ANC visit. Some of the other reasons include not feeling the need to have ANC (17 per cent) and not having anyone to accompany for the visit (13 per cent).

Table 26: Reasons for less than three ANC visits

	N (n=72)	<i>% of cases</i>
Had no information about it	42	58
Did not feel the need of ANC visits	12	17
No one to accompany	9	13
Had no time for the visits	6	8
No such ANC facility in the village	4	6
Family pressure	3	4
Was not present in the village	2	3
Others	6	8
Total	84	117

Of the total visits made for ANC, the most number of visits were to the VHND (39 per cent) while 17 percent were to a qualified private practitioner and 16 per cent to the CHC. Another 12 per cent of the visits were made to the primary Health Center and 10 per cent to the sub-center.

Table 27: Place visited for ANC

Place visited	<i>N</i>	% of visits
Village health and nutrition day (ANM)	786	39
Qualified private doctor's clinic	348	17
CHC	328	16
PHC	235	12
SHC	209	10
District hospital	64	3
Unqualified private doctor's clinic	22	1
At home by ANM	2	0
Others	4	0
Total	1998	100

Quality of ANC

Of the respondents, most received TT injections once. The proportion of women who had their weight measured, abdomen examined, and BP taken are 91 percent, 89 percent and 87 percent. 71 per cent of the women had their blood and urine samples taken while 32 per cent of the women underwent an ultrasound (Table:). Of the respondents who had received the various ANC services at least once, on an average TT had been received one, weight measured thrice, BP measured thrice and had their blood sample taken twice and urine

sample once (Table:). The average number of ultrasounds was one for Sarguja and Mahasamund while it was two for Bastar.

District disaggregated data shows that Sarguja has a lower proportion of women receiving the various ANC services, when compared to the other districts, however the percentage of women undergoing ultrasound is the highest (39 per cent). In Sarguja, the average number of times weight and BP have been measured and abdomen been examined, is lower than the other districts.

Nearly one third of the women had received less than 90 IFA tablets.

Table 28: Services received at least once during ANC

Services received at least once	Sarguja	Mahasamund	Bastar	Combined
(n= number of respondents)	187	158	166	511
TT %	91	96	94	94
Weight measurement %	88	93	92	91
Abdomen examination %	86	96	87	89
BP measurement %	81	91	90	87
Nutrition counseling %	75	85	79	79
Blood sample taken %	63	78	74	71
Urine sample taken %	60	78	76	71
Ultrasound %	39	28	27	32
Danger Signs explained %	21	21	23	22

Table 29: Average number of times ANC services received by those who had received at least once

ANC Services received	Surguja	Mahasamund	Bastar	Combined
Weight measurement	3	4	4	3
BP measurement	2	4	3	3
Abdomen examination	3	3	4	3
Suggestion for Food	3	4	4	3
Signs of Danger explained	2	4	3	3
Blood sample collected	2	2	2	2
TT	2	2	2	2
Urine sample collected	2	1	2	1
Ultrasound	1	1	2	1

ANC OOP

Of the respondents, 62 per cent incurred expenditure during ANC visits. Of the women who had to incur expenditure, the median value of expenditure is Rs. 900.

Half of the respondents incurred expenditure on their travel to and from the place of ANC visit. Their median expenditure was Rs. 100 either ways. More than one third had to spend money (median=Rs. 750) on medicines. The median expenditure on ultrasound was Rs. 500 while the median expenditure on money to the doctor was Rs. 450 and on diagnostics it was Rs. 200.

Table 30: Head wise expenditure on ANC

Expenditure Head	% who incurred expenditure (n=511)	Median expenditure of those who incurred expenditure (Rs.)
Travel to venue	50	100
Travel from venue	50	100
Medicines/Consumables	34	750
Ultrasound	26	500
Money to Doctor	24	450
Diagnostics	21	200
Money to ANM/nurse	4	300
Blood	3	100
Money to Sweeper	0	150
Others	2	3000
Total	62	900

Delivery

Of the 511 respondents, there were seven cases of miscarriage that will be dealt with in a subsequent section.

With respect to the place of delivery, the study finds that 72 per cent of the deliveries occurred in various institutions while 28 per cent of the women delivered at home.

If we calculate district wise, we find that the highest proportion of institutional deliveries is in Mahasamund (79 per cent) followed by Sarguja (73 per cent) and then Bastar (63 per cent) (Table:).

Table 31: Place of delivery district wise

Place of delivery	Sarguja		Mahasamund		Bastar		Combined	
	n	%	n	%	n	%	n	%
Home	49	27	33	21	61	37	143	28
Institutional	133	73	123	79	105	63	361	72
Total	182	100	156	100	166	100	504	100

Disaggregated data on place of delivery by social category shows that women belonging to scheduled tribes have a lower proportion (62 per cent) of institutional deliveries than other castes, followed by women of Scheduled castes (77 percent) (Table:).

Similarly disaggregation by educational status shows that women who are non-literate have the lowest proportion of institutional deliveries (60 percent) while the highest percentage is among women who are graduates (100 percent) and those who have studied till 12th (91 percent).

Table 32: Place of delivery by social category

Social Category	Home delivery %	Institutional delivery %
ST (n=269)	38	62
SC (n=43)	23	77

OBC (n=174)	15	85
General (n=14)	21	79
Total (n=500)	28	72

Non-response=4

Table 33: Place of delivery by education status

Education status	Home delivery %	Institutional delivery %
Non-literate (n=188)	40	60
Studied till 5th (n=80)	31	69
Studied till 10th (n=164)	18	82
Studied till 12th (n=35)	9	91
Graduate (n=10)	0	100
Post-graduate (n=4)	25	75
Literate but never went to school (n=21)	38	62
Total (n=502)	28	72

Non response=2

Home Delivery

Out of 504 women who delivered, 143 women had a home delivery. It was explored whether they had planned to go to a facility and what steps they had taken thereof.

The study finds that half of the women, who had home delivery, had intended to go to a facility for delivery (Table:). The main reasons given by the other half for not wanting to go to an institution were that they thought home delivery is better (77 per cent), they did not think it necessary due to no complications (27 per cent) (Table:). Some other felt that the hospital is too far (7 percent) or that it would involve too much expenditure (8 per cent).

Table 34: Whether intended to go for institutional delivery

Intention to go for institutional delivery	n	%
Yes	72	50
No	71	50
Total	143	100

Table 35: Reasons for not intending to have institutional delivery

Reasons	N (n=71)	% of cases
Home delivery is better	55	77
No complication hence it was not required	19	27
Hospital is too far	5	7
No conveyance	2	3

Facilities in hospital not good	2	3
Too much expenditure in hospital	6	8
Previous bad experience	1	1
Others	4	6
Total	94	132

Of the respondents who had a home delivery, 35 women had tried to go an institution at the onset of the labour pains. Out of these, 16 tried to call 108/102 and one person tried to call a private vehicle. In six of these cases, the 108/102 vehicle came.

Table 36: Whether tried to go to an institution

Tried to go to an institution	N	%
Yes	35	24
No	106	74
Missing	2	1
Total	143	100

Table 37: Whether called vehicle

	<i>n</i>	%
Called 108/102	16	46
Called Private vehicle	1	3

Did not call any vehicle	18	51
Total	35	100

In more than half of the cases (59 per cent) of home delivery, the delivery was performed by a Dai. Relatives performed 19 percent of the deliveries while an unqualified health practitioner and ANM conducted seven and six percent of the deliveries each.

Table 38: Person performing home delivery

Person performing home delivery	n	%
Dai	84	59
Relatives	27	19
Unqualified practitioner	10	7
ANM	9	6
Others	10	7
Missing	3	2
Total	143	100

In 82 percent of cases in home delivery, new blades were used while a new thread was used to tie the chord in 76 per cent of the cases. However, something was applied to the chord stump of the child in 64 percent of the cases.

Table 39: Care taken during home delivery

Practices during home delivery	n	% of cases
New blades were used	116	82
Person conducting delivery washed hands with soap	112	79
New thread used to tie the chord	108	76
Clean sheet was used	53	37
Nothing was applied on the chord stump of the baby	51	36
Person conducting delivery used gloves	22	15
Others	2	1
Don't know	9	6

In 16 per cent of the cases of home delivery, some injection was administered to the woman. Of these cases, the Dai gave injection to eight women, ANM administered it to five and unqualified practitioner gave to five and relatives to two women.

Table 40: Whether injection was given during home delivery

Use of Injection	N	%
Injection given before birth of newborn	14	10
Injection given after birth of	7	5

newborn		
After the delivery of Placenta	1	1
No Injection given	117	82
Missing	4	3
Total	143	100

Availability of Mitnin

In 60 percent of the cases of home delivery, the family called the Mitnin. In 85 per cent of the cases the Mitnin came.

Table 41: Mitnain Services

	N	%
Mitnin called	86	60
Mitnin not called	57	40

OOP in Home delivery

Of the women who delivered at home, 55 percent incurred expenditure. The median amount of expenditure incurred was Rs. 450. Around one third (33 per cent) of the women incurred expenditure in paying the dai. The highest median expenditure was on paying the ANM/Nurse that amounted to Rs. 900.

Table 42: Out of pocket expenditure in Home Delivery

Expenditure Head	% Who incurred expenditure on the item (n=143)	Median expenditure of those who incurred expenditure (Rs.)
Dai	33	450
Medicine	7	250
Injection	5	300
Money to ANM/nurse	4	900
Mitanin	1	700
Others	16	300
Total	55	450

Institutional delivery

Of the sample, 361 women had an institutional delivery. The reasons that they gave for going for institutional delivery include that they consider it a safer option (71 per cent of the cases), the Mitnin suggested to them (47 per cent), it was the family's decision (31 per cent) and that it was easy to reach the facility (25 per cent) (Table:). Another 17 per cent said that getting the JSY incentive was one of the reasons that they went to the institution.

Table 43: Reasons for deciding to deliver in an institution

Reasons	<i>N (n= 357)*</i>	<i>% of cases</i>
Consider institutional delivery as safer	252	71
Mitnin suggested	169	47
Family's decision	112	31
Easy to reach health facility/hospital	88	25
Money under JSY scheme	61	17
Mitnin accompanied. That gave confidence	38	11
ANM suggested	34	10
Previous child was born there	20	6
Free services	14	4
Had some complications in the previous pregnancy	8	2
Had complications during this pregnancy and was referred	6	2

Others	10	3
Total	812	227

* non response by four respondents

The respondents were also asked about whether they were motivated by someone to go for institutional delivery. Someone had motivated the respondent in 90 percent of the cases. Out of these, in a majority (85 per cent) of the cases, they said that the Mitadin had motivated them, followed by the Anganwadi worker (30 per cent), family members (24 per cent) and the ANM/MPW (23 percent) (Table:).

Table 44: Person motivating for institutional delivery

Person who motivated	N (n=323)	<i>% of cases</i>
Mitadin	271	85
Anganwadi worker	97	30
Family members	76	24
ANM/MPW	74	23
Neighbors/family	21	7
Government doctor	6	2
Pvt health provider	6	2
Magazine/pamphlet	5	2
Radio/TV	4	1
Panchayat members	3	1
SHG members	2	1
Dai	1	0

Others	2	1
Total	568	178

The respondents went to both public and private facilities for their delivery, however, a higher proportion (85 per cent) went to a public facility. When we disaggregate by institution, we find that overall about one third (33 per cent) of the deliveries took place in the CHC, 20 per cent in the SHC, 17 percent in PHCs, 15 percent in the district hospital and 14 percent in private facilities (Table:). However, when we compare the districts, we find that they differ largely in this matter.

In Sarguja, more than half (58 per cent) of the deliveries took place in the CHC while for Mahasamund and Bastar the percentages were 18 percent and 21 percent respectively. In Mahasamund, the highest proportion (31 per cent) of deliveries took place in private facilities while for Sarguja it is 6 percent and in Bastar it is 3 per cent. The percentage of deliveries in the district hospital of Sarguja, Mahasamund and Bastar were 11, 16 and 18 percent respectively.

In Bastar, the highest number of deliveries took place at the SHCs (29 percent) and then in PHCs (28 per cent). In Mahasamund, after private facilities, the largest number of deliveries took place in the SHCs (27 per cent) while the least number of deliveries took place in PHCs (7 per cent). In Sarguja percentage of deliveries at the SHC is 8 per cent while at the PHC it is 18 per cent.

Table 45: Type of institution

Type of institution	n	%
Public	307	85
Private	49	14
On the way	1	0
Missing	4	1

Total	361	100
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Table 46: Type of institution by district and level of facility

Type of institution	Surguja		Mahasamund		Bastar		Combined	
	n	%	n	%	n	%	n	%
District hospital	14	11	20	16	19	18	53	15
CHC	75	56	22	18	22	21	119	33
PHC	24	18	8	7	29	28	61	17
SHC	11	8	33	27	30	29	74	20
Private	8	6	38	31	3	3	49	14
On the way	0	0	1	1	0	0	1	0
Missing	1	1	1	1	2	2	4	1
Total	133	100	123	100	105	100	361	100

The respondents were asked about the reasons for choosing a particular facility. For 65 per cent women who delivered in public facilities, the reason was less expenditure, while for 63 percent it was free services (Table:). Of the women, 54 percent said that the facility was close to home and 52 percent stated good services as reason for selecting the facility. In 13 percent of the cases, the reason was that they usually visit there.

In the case of women delivering in the private facility, availing good services was the reason for 85 percent of cases, the fact that they usually go there was the reason for one third (31 percent) of the cases. The other main reasons were that

it is close to place of residence (21 percent), and the facility was accredited under JSY (15 percent).

Table 47: Reasons for choosing the facility by public and private

Reasons	Public (n=301)		Private (n=48)	
	n	% of cases	n	% of cases
Less expenditure	197	65		
Free services	190	63		
Close to home	162	54	10	21
Good services	158	52	41	85
Visit there usually	40	13	15	31
Previous good experience	10	3	2	4
Accredited under JSY			7	15
Accredited under RSBY/MSBY			3	6
Others	9	3	3	6
Total	766	254	81	169

Non response= 7

With respect to whether the respondents would return to the facility for subsequent deliveries or suggest it to a friend, 88 percent of people who went to a public facility and 76 percent of people who went to a private facility, said that they will go back or suggest it to a friend (Table:). In the reasons for doing so, 76 percent of people who went to the public facility and 97 percent of people going to the private facility, said that they were satisfied with the treatment offered by

the institution. Additionally, 73 percent of the women going to private facility said that they were satisfied with the facilities provided while for public facilities, the proportion was 37 per cent. Some of the other reasons for women going to a public facility were that it is easy to reach (47 per cent), and that there is less expenditure (41 per cent).

Table 48: Whether they would choose this institution for the next delivery or suggest it to a friend

Whether will go to/suggest the institution in future	Public		Private	
	n	%	n	%
Yes	268	88	37	76
No	35	12	12	24
Total	303	100	49	100

Table 49: Reasons for choosing/suggesting the institution in the future

Reasons for choosing/suggesting the institution in the future	Public		Private	
	n	% of cases	n	% of cases
Satisfied with the treatment offered by the institution	204	76	36	97
Easy to reach the institution	125	47	6	16
Less expenditure	109	41	5	14
Satisfied with the facilities available in the institution	100	37	27	73

Faith in service provider	41	15	7	19
Availability of medicines	26	10	2	5
Others	5	2	1	3
Total	610	228	84	227

Type of delivery

Of the women who had institutional delivery, 93 percent had a normal delivery (including episiotomy and vacuum delivery), while 8 percent had c-section. The total number of C-sections was 27 of which 11 were conducted in DH, two in CHCs and 14 in private.

The proportion of C-section deliveries to total deliveries in the private institutions, i.e. 29 percent, is higher than that at the DH (21 percent) and CHC (2 per cent).

Table 50: Type of delivery by facility (n=361)

Type of facility	Normal delivery %	C-Section %
District Hospital	79	21
CHC	98	2
PHC	100	0
SHC	100	0
Private Hospital	71	29

On the way to facility/hospital	100	0
Others	100	0
Total	93	8

JSSK entitlements

Free transport is one of the entitlements of JSSK. The study finds that 64 percent of the women had called some transport (Table:). Of these, 82 percent called the government vehicle 102/108 while 14 percent called a private vehicle (Table:).

When compared within districts, 77 percent of respondents in Sarguja, 54 percent in Mahasamund and 59 per cent in Bastar called for transport. In Sarguja, 91 per cent of women called the government vehicle (102/108), while this percentage were 66 per cent in Mahasamund and 85 percent in Bastar. In Mahasamund, 30 percent of the respondents called a private vehicle while in Bastar, the percentage was 13 percent.

Of the 189 people who called for the government 102/108 transport, the vehicle reached in 97 per cent of the time. In 86 per cent of the cases, the time taken to come was less than an hour while in 9 percent of cases, it took between one to two hours to come (Table:). In Sarguja, the vehicle took one to two hours in 13 percent of the cases.

Table 51: Transport Utilization

	Sarguja %	Mahasamund %	Bastar %	Combined % (n=359)
Called transport	77	54	59	64
Did not call transport	23	46	41	36

Total	100	100	100	100
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Table 52: Type of transport called by district

Type of transport called	Sarguja %	Mahasamund %	Bastar %	Combined % (n=229)
Own/Arranged	4	5	0	3
102	79	61	74	72
108	12	5	11	10
Private reserved	4	30	13	14
Don't know	1	0	0	0
Missing	0	0	2	0
Total	100	101	100	99

Table 53: Whether 102/108 transport arrived

	Sarguja %	Mahasamund %	Bastar %	Combined %
Arrived	99	95	96	97
Did not come	1	5	4	3

Table 54: Time taken for 102/108 transport to arrive

Time taken to come	Surguja(93)		Mahasamund(41)		Bastar(50)		Combined (184)	
	n	%	n	%	n	%	n	%
<1 hr	77	83	36	88	46	92	159	86
1-2 hr	12	13	3	7	2	4	17	9
2-4 hr	2	2	1	2	0	0	3	2
Missing	2	2	1	2	2	4	5	3
Total	93	100	41	100	50	100	184	100

Of the respondents going to a public facility, who had not called any form of transport or had not called the government vehicle, were asked the reasons for not using it. Of these, 54 percent said that they simply did not call, while 10 percent did call, however were unable to avail it due to reasons such as there was faulty phone connection, vehicle did not come and they could not wait for it. For 21 percent, the facility is close to their residence and therefore they did not need any kind of transport.

Table 55: Reasons for not using 102/108 to avail institutional delivery (n=127)

Reasons	n	% of cases
Didn't call at the first place	59	46
Called but could not avail (faulty phone connection, vehicle not coming, not able to wait)	13	10

No information about any such service	2	2
No such facility available?	4	3
Not required as residence close by	27	21
Don't know	11	9
Others	21	20

Finally, of the total number of women who had institutional delivery in a public facility, 15 percent had to hire a private vehicle while another 15 percent went in their own vehicle. A little more than half (57 percent) were able to go to the institution in a government 102/108 vehicles.

Table 56: Means of transport finally used to go to a public facility (n=299)

Transport used to go to facility	N	%
102	149	50
108	21	7
Private hired vehicle	44	15
Own/relative/friend's vehicle (no hiring cost)	46	15
Others	39	13
Total	299	100

Missing= 8

Provision of return transport

Of the women who delivered at a public facility, return transport was provided to 60 percent of them. When we compare the districts we find that for Mahasamund it is the lowest at 39 percent, in Bastar it is 57 percent while for Surguja it is 76 percent. In Bastar, nearly all women were provided return transport (95 percent from DH and 91 per cent from CHC). In Surguja, 91 per cent of women were provided return transport from the CHC while from the DH, the percentage was 71 per cent. In Mahasamund, return transport from DH was provided to 58 percent of women going there while for CHC it was 68 percent. The proportion of women getting return transport from PHC/SHC were the lowest in all districts.

Table 57: Percentage of respondents who were provided return transport, by district and facility

Type of Facility	Surguja % (n=123)	Mahasamund % (n=82)	Bastar % (n=98)	Combined % (n=303)
DH	71	58	95	75
CHC	91	68	91	86
PHC/SHC	49	15	32	31
Total	76	39	57	60

Provision of Food

Overall, food was provided to 55 percent of women delivering in a public facility. The lowest proportion (20 per cent) was of women delivering at the PHC/SHC. District wise disaggregated data shows that the proportion of women who got food at the DH was 93 percent in Surguja, 65 percent in Mahasamund and 89 percent in Bastar. For women delivering at the CHC, this proportion was 91, 55 and 86 percent in Surguja, Mahasamund and Bastar respectively.

Table 58: Percentage of respondents to whom food was provided, by district and facility

Type of facility	Surguja % (n=124)	Mahasamund % (n=82)	Bastar % (n=99)	Combined (n=305)
DH	93	65	89	81
CHC	91	55	86	83
PHC/SHC	37	10	17	20
Total	76	35	46	55

Amongst all women having normal delivery at an institution, 26 per cent stayed in the facility for less than 12 hours, 32 percent stayed between 12 to 48 hours and 43 per cent stayed for more than 48 hours (Table:). All 27 respondents who had C-section, stayed in the hospital for more than 48 hours.

Table 59: Period of stay at the facility for normal deliveries

Period of hospital stay (normal delivery)	DH % (n=40)	CHC % (n=117)	PHC/SHC % (n=135)	Private % (n=35)	Combined % (n=327)
<12 hrs	5	3	47	43	26
12-48 hrs	32	38	27	29	32
>48 hrs	63	59	26	29	43

With respect to reasons for not staying at the public facility for 48 hours, nearly one third (62 percent) said that the hospital discharged them while in another six percent of cases, the hospital staff told her to go as they needed the bed. In 10 percent of cases, the woman did not feel comfortable/safe and therefore decided to leave while in 23 percent of cases the family wanted the discharge.

Table 60: Reasons for leaving the public facility before 48 hours (n=143)

Reasons	N	% of cases
Was given discharge	89	62
My family wanted the discharge	33	23
I wanted to go as it wasn't comfortable/safe	15	10
Needed to tend to children at home	13	9
No one asked to stay longer	9	6
Hospital staff asked to leave as they needed a bed	9	6
Too much expense	1	1
No one in the hospital to take care of me	1	1
Others	10	7

Availability of Blood

Blood transfusion was required by 11 women, with seven in public facility and four in private facility. Out of the seven in public facility, five got the blood from the government institution itself. Of the four admitted in private facilities, three got it from a private institution while one received blood from a family member. Out of these 11 cases, six had to pay for the blood, one in government and five in private facility.

Referral transport

A total of fourteen respondents went from the CHC to another facility where the delivery finally happened. Of these, seven cases went to a DH, six to private and one to PHC. Of these, four were provided referral transport to go to the DH.

From a DH, two respondents went to a private hospital for delivery. Referral transport was not provided for these cases.

Out of 16 cases that went from the PHC/SHC to a higher facility, eight went to DH of which five were provided transport. Five cases went to the CHC of which only one person was provided transport. From the PHC/SHC, the remaining three people went to a private facility for which no transport was provided.

Quality of services

The largest number of deliveries (90 percent) at the public facilities, were performed by the ANM or Nurse. At the DH, this proportion was 70 percent while the proportion of deliveries performed by a doctor was 30 percent. At the private facility, more than half (57 percent) of the deliveries were done by the Nurse while 41 per cent of the deliveries were performed by a doctor.

Table 61: Person performing delivery at facility

Person who performed delivery	DH (n=53)	CHC (n=119)	PHC/SHC (n=135)	Combined Public (n=307)	Private (n=49)
ANM/Nurse	70	92	97	90	57
Doctor/Gynecologist	30	4	1	7	41
Dai	0	1	1	1	0
Others	0	3	1	2	0
Missing	0	0	0	0	2
Total	100	100	100	100	100

Of the deliveries that took place in the public facilities, 86 percent took place on the labour table in the labour room. At the DH, 15 percent of the deliveries took place at the OT while at the CHCs, 13 percent took place on a bed in the labour room.

In private facilities, 71 percent of the deliveries took place in the labour room on the labour table while 27 percent of the deliveries took place in the operation theatre.

Table 62: Place of delivery

Place of delivery	DH % (n=53)	CHC % (n=119)	PHC/SHC % (n=135)	Combined Public % (n=307)	Private% (n=49)
Labour Table in labour room	83	82	91	86	71
Labour Room Bed	2	13	8	9	2
Operation theatre	15	3	0	4	27
Bed in the Ward	0	1	0	0	0
Others	0	2	1	1	0
Total	100	100	100	100	100

OOPE in institutional delivery

Out of pocket expenditure for deliveries was incurred by 98 percent of women who went to a private facility and by 56 percent of women who went to a public facility. The median expenditure in private facilities (Rs. 6400) was ten times more than that in public facilities (Rs. 640).

In the private sector, the highest median expenditure was on operation (Rs. 15500) followed by money to doctor (Rs. 14500).

In the public sector, 27 percent of women incurred OOP expenditure on medicines, 21 per cent on money to the nurse/ANM, 20 percent on food for family and 16 percent on transport. Among women who went to the private sector, 47 per cent spent on medicines, 37 percent on transport and 29 percent each on food for self and family.

Table 63: OOPE in institutional delivery

Expenditure head	Private		Public	
	% who incurred expenditure	Median expenditure for those who incurred expenditure	% who incurred expenditure	Median expenditure for those who incurred expenditure
Operation	16	15500	1	3000
Hospital stay	18	3000	1	1000
Medicines	47	1000	27	400
Diagnostics	12	500	1	250
Ultrasound	8	650	1	500

Blood Transfusion	2	2000	1	4000
Money to ANM/Nurse	10	300	21	300
Money to Doctor	6	14500	3	500
Money to sweeper etc	2	100	9	150
Food for self	29	1000	5	200
Food for family	29	900	20	300
Gloves/injection	2	2000	6	270
Photocopy	2	20	9	20
Money for treatment	16	3000	3	500
Transport	37	1100	16	400
Others	49	5000	3	550
Total	98	6400	56	640

Use of RSBY

RSBY for delivery was used by 16 respondents in Institutional Delivery

Of the people who used the card, five did not know about the amount that was deducted from the card. For the rest, the median amount deducted was Rs. 13000. Despite using the Bima card, 12 of these 16 had to incur a median Out of Pocket Expenditure of Rs. 2900.

Table 64: Receipt in case of Deduction from Bima Card

Received receipt	N	%
Yes	9	56
No	7	44
Total	16	100

Table 65: Transport Fee payment during Bima Card Usage

Received transport fee	N	%
Yes	1	6
No	9	56
Don't Know	3	19
Missing	3	19
	16	100

Neonatal care

There were 50 neonates who experienced atleast one type of complication. More than half (52 percent) of the neonates were had experienced cough and cold, 16 percent had fever, and eight percent had fever with shivers.

Table 66: Percentage of neonates experiencing various symptoms (multiple responses)

Symptoms	N (n=50)	%
Cough and cold	26	52
Fever	19	38
Jaundice	8	16
Dysentery and loose motions	5	10
Baby didn't breastfeed properly	4	8
Fever with shivers	4	8
Baby was unconscious	3	6
Vomiting	3	6
Respiratory infection	2	4
No movements in new born	2	4
Wound	2	4
Body of the new born went cold	1	2
Body color became blue	1	2

Bleeding from any part of the body	1	2
Malnourished	1	2
Others	9	18
	91	182

Of the 50 neonates who experienced atleast one complication, 48 were taken by their families for some treatment. Ten of them were treated within the village itself. Of these, six were taken to a quack, one to the Mitadin, and two to the traditional healer. The main reasons for not going to an institution were that it was the family's decision, there was no access to health service and that they had faith in the service provider they went to.

Table 67: Reasons for not taking the neonate to an institution

Reasons	Number of respondents
Family decided	3
No access to health service	3
Faith in service provider	2
No one to accompany	1
Family responsibilities	1
Financial reasons	1
Could not arrange transport	1
Others	1

Of the 38 who were taken to a facility, 25 were taken to a private facility while 12 neonates were taken to a public facility, five to a CHC, and three each to a DH and PHC.

Table 68: facility to which the neonate was taken

Type of facility	n	%
DH	3	8
CHC	5	14
PHC	3	8
SHC	1	3
Private	25	61
Private unqualified practitioner	1	3
Total	38	100

Availability of free Transport

Of the 12 families who went to a public facility three called for transport. One family called for 102 that came subsequently, one hired a private vehicle while the third family went in their own vehicle.

Of those who did not call for transport, the main reasons were, lack of information regarding 102 service (five respondents), and that the facility was near to home (two respondents).

Table 69: Transport called by family going to public facility

Whether called for transport	n	%

Yes	3	25
No	9	75
Total	12	100

Table 70: Reasons for not calling govt vehicle to go to public facility (n=10)_

Reason	n	%
No such facility available?	4	10
No information about any such service	3	51
Called for vehicle but it didn't come	1	3
Called, promised but couldn't wait for the vehicle	1	3
Didn't call at the first place	2	5
Facility close by/not required	6	15
Went to private	3	8
Others	10	26

Availability of free food

Of the neonates who went to an institution, 13 were admitted and the rest were treated in the OPD. Of the 13 neonates, two got admitted in DH (DH-Ambikapur) and were provided free food. 11 were admitted in private and not provided food.

OOPE in neonates

More than half of the respondents going to a public facility, incurred OOPE, with the median expenditure amounting to Rs. 300. The median OOPE in the private sector was Rs. 1200 and the village it was Rs. 400.

Table 71: OOPE during treatment for neonate

Indicator	In the village (n=10)	Private facility (n=25)	Public facility (n=12)
No. of cases that Incurred OOP expenditure	6	21	7
No. of cases that did not incur OOP expenditure	4	4	5
Median Value (Rs.)	400	1200	300

Use of RSBY

Two of the respondents utilised the RSBY Card for treatment of the neonate. For the neonate who got the treatment at DH Ambikapur, Rs. 4000 was deducted and they did not incur any further OOP.

For the other respondent, who got the treatment in a Multispeciality hospital in Raipur, Rs. 16000 was deducted from the insurance Card and they had to also incur OOPE expenditure of Rs. 17000 on hospital stay and medicines.

Janani Suraksha Yojana (JSY)

Of the total home deliveries, seven percent had received the JSY incentive.

Table 72: Receipt of JSY incentive in home delivery of all women undergoing home delivery

Receipt of JSY incentive	n	%
Have not received	127	89
Have received	10	7
Yet to receive	3	2
Missing	3	2
Total	143	100

Of the total deliveries in public facilities, and JSY accredited private facilities, 79 percent of women had received the JSY incentive. However, 18 percent had not received the incentive.

Table: Receipt of JSY incentive

Receipt of incentive	No of women	%
Received	260	79
Didn't Receive	58	18
Yet to receive	7	2
Missing	3	1
Total	328	100

DISCUSSION

Access to PDS not universal

As per the Chhattisgarh Food Security Act, 2012, nearly all of the population, except for certain excluded households, is supposed to have a ration card. However, the study finds that 18 percent of the respondents did not have a ration card.

Access to RSBY/MSBYPDS not universal

Rashtriya Swasthya Bima Yojana was introduced in 2008 in Chhattisgarh for BPL families (not more than five family members) to provide health cover and security against catastrophic health expenditure, with a monthly cap of Rs. 30,000 per year. In the year 2012, Mukhyamantri Swasthya Bima Yojana was announced which extended RSBY cover to non-BPL families in the state, thereby universalizing insurance coverage. However, the study finds that only half of them were enrolled while the rest were not. This corroborates other studies on enrolment in RSBY/MSBY and also illustrates the inefficacy of the scheme.

Access to ICDS services not regular

Provisions under ICDS are supposed to reach all pregnant and lactating women as per the order of the Supreme Court. However, the study finds that one fourth of the respondents are not able to access the supplementary nutrition regularly.

Very poor functionality of the scheme of Maternity Allowance under MNREGA

Although around half of the respondents seem to be eligible for this benefit, only 5% could get it. The proportion of women who applied is low as more than two-third of the eligible women are not aware of the scheme. The functionality of the scheme to be also poor as even with very small number of applications, less than half resulted in women getting the benefit.

Very poor coverage of JSY entitlement for home deliveries

Very few women had received the JSY entitlement for home deliveries. This is a case for serious concern as this is a Supreme Court warranted entitlement for nutrition during pregnancy.

Quality of delivery services compromised in many facilities

The facility survey has thrown up concerns regarding the quality of delivery and neonatal services. Though it was found that the various facilities are undertaking deliveries, there seems to be gaps in the preparedness for dealing with both basic deliveries and emergencies. This may be illustrated by the following:

Non-availability of certain essential medicines and consumables in the facilities- Misoprostol which is an essential drug for managing PPH, was not available in a number of higher facilities, like in Sarguja DH, Lakhanpur, Saraipali, Lohandiguda and Tokapal CHCs. Magnesium Sulphate which is also a critical drug during delivery, to manage eclampsia, was not available at Tokapal, Lakhanpur and Saraipali CHCs. The availability of medicines at the PHC level differed from district to district. In the PHCs surveyed in Sarguja, Misoprostal and ACT were not available. This is despite the fact that it is one of the malaria endemic districts. The SHC surveyed in Tokapal block because it undertakes a large number of deliveries, did not have stocks of Magnesium Sulfate, Misoprostal, or quinine.

No-availability of C-Section at the CHCs- None of the CHCs that were surveyed provided services for C-Section deliveries.

Non-availability of blood bank/storage facility- Blood storage or Blood Bank facility is not available at Lakhanpur, Saraipali, Lohandiguda and Tokapal CHCs. In Bagbahra and Udaypur CHCs, equipments were available, but blood storage unit has not yet started.

Gaps in HR- None of the CHCs surveyed have a Gynecologist. In Udaipur CHC there is a Pediatrician and an Anesthetist. In the PHCs surveyed, there were no Staff Nurses. The PHCs in Bastar did not have a MBBS MO.

Non-availability of baby warmers- None of the PHCs had baby warmers though most of them undertook deliveries.

Good coverage of ANC services

The study finds that the coverage of ANC services is quite high and most women have undertaken the stipulated three ANC visits. The other critical thing is that most of the ANC is occurring within the public health system, mostly by the ANM or in the CHCs/PHCs. The quality of the ANC services also seems good with a high coverage of all the eight essential ANC services. However, district wise, Sarguja seems to be performing worse than the other two sample districts.

There is high preference for institutional delivery however, certain barriers remain for the community

The study finds that institutional delivery is quite high at 72 per cent and additionally, half of those women who had a home delivery, also wanted to go for institutional delivery. Therefore, awareness of the significance of delivering in a facility seems to be very high and there seems to be certain challenges preventing this for the women who have ended up having delivered at home. For example, with respect to availability of transport to the facility, half of those who had home deliveries, tried to go to a facility and half of those called for transport. The vehicle came in only six out of sixteen cases. This shows that not getting free transport still remains a barrier in many cases.

The other issue to be highlighted here is that when we look at the data from Bastar, we find that though ANC coverage is higher than Sarguja, the percentage of institutional delivery is lower. This reflects the inequity in availability of higher services and facilities. This is also reflected in the inequity in access to health services based on social categories and educational status, where we find that the proportion of home deliveries were highest among the Tribal and non-literate respondents.

Very low coverage of SBA in home deliveries

The proportion of home deliveries that were conducted by the ANM or any trained staff is very low. This reflects the lack of even primary health services in certain areas.

More institutional deliveries happening in public facilities

A larger proportion (85 percent) of the institutional deliveries are being conducted in the public facilities. Within that, there are fewer deliveries in sub centers and nearly three fourths are taking place at the PHC and higher levels. The main reason given for this was that it is less expensive than the private sector. This is a positive indication with respect to strengthening the public health system.

Higher proportion of C-section deliveries being conducted in the private sector

Of the total deliveries being conducted at the various facilities, a higher number of C-sections are being conducted at the private facilities. This may be an indication of producer-induced demand.

Availability of free transport high for people who call for it

The availability of 102/108 transport was found to be high for people who called it. However, nearly one third of the respondents who went to a public facility did not utilise the transport, the main reasons being that they just did not call, they called but could not connect or the vehicle did not come/came late or that the facility was near their house and therefore they did not require transport.

Gaps exist in provision of return transport and food

Return transport was provided to 60 percent of the women who delivered at a public facility. This proportion was lowest at the PHC/SHC level. Free food was provided to a lesser proportion (55 per cent) of women. This percentage is lowest in Mahasamund and at the PHC/SHC levels.

Women staying for less than 48 hours in a public facility mostly because the hospital is sending them back

Nearly two thirds of the women who stayed in the public facility for less than 48 hours, said that it was the hospital that discharged them. Additionally, there were cases in which the hospital staff told them to go because they needed the bed. As receiving JSSK entitlements depend on a woman staying at the facility for at least 48 hours, many women may have been unable to receive the JSSK entitlements as a result of this.

Referral transport not provided in all cases

The study finds that though referral transport was provide din some cases where the woman went to a higher public facility, it was not ensured in all such cases.

ANMs/Staff Nurses conducting most deliveries in public facilities and more than half in private facilities

Most of the deliveries in the CHCs, PHCs/SHCs are being conducted by the ANMs and nurses. It is only in the DH that doctors have conducted deliveries. In the private sector too, the nurses conducted more than half of the deliveries.

OOPE continues in the public facilities despite JSSK

Despite JSSK and other schemes for free services to women, more than half of the women going to the public sector had to incur out of pocket expenditure. The highest proportion of women incurred expenditure on medicines, money to the ANM/Nurse, food for companions and transport. These expenses, other than food for companions, should have been covered under JSSK.

Delivering in a private facility is nearly ten times more expensive than in the public sector

For women delivering in a private facility, the median expenditure was ten times more than women delivering at the public facility. The highest proportion of women incurred money on medicines, hospital stay, treatment and staff.

RSBY/MSBY hardly used for deliveries

Even though half of the women had insurance cards, only 16 women used it for delivery.

OOPE incurred despite using RSBY/MSBY

Despite using the card, 12 women incurred out of pocket expenditure, while the family who utilised the card for their neonate in a private facility, had to also pay OOPE.

Neonates mostly taken to private facilities in case of complications

Of the neonates who had complications, most were taken to private facilities. Only one family, of the families who had gone to the public sector, called for 102 vehicle. The main reasons for the other's not calling were that they did not know about this service for neonates and that the facility was near their place of residence.

CONCLUSION

The current study has been able to provide a much needed comprehensive status of implementation of important schemes related to maternal and newborn health care. There seems to have been improvements in making the public health system accessible to the community for delivery services, however, gaps still remains especially with respect to quality of services and out of pocket expenditure. Moreover, many people are getting excluded from utilizing these services and schemes due to barriers that need to be addressed urgently. It is hoped that this study will help civil society and the government to focus on the critical gaps that need to be filled in order to ensure that the women and children of this state are not denied their right to quality and free services.

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