

Original Research**Evaluation of ANC Provided Under JSY in Rewa District, Madhya Pradesh**Som N¹, Sunil K², Anju G³

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Abstract: In India, Janani Suraksha Yojana (JSY) has been implemented in all states and UTs with special focus on low performing states under NRHM with objective to reduce maternal, neo-natal mortality and promote institutional delivery. In M.P., NMR is 269 maternal deaths per 100000 Live birth (2007-09). M.P. is one of the states classified as Low performing States (LPS) as well as Empowered Action Group (EAG) States in context to demographic and health status point of views. **Objective:** To evaluate antenatal care provided under Janani Suraksha Yojana (JSY) and to know the perception of beneficiaries on quality of care. **Methodology:** This is a health care institute based observational cross sectional study including randomly selected 200 JSY beneficiary mothers from the different health care settings i.e. PHC, CHC, DH and Medical College Hospital of Rewa Distt, M.P. Data was collected with the help of set proforma and then analysed with applying epi info 2000. Chi square test was applied appropriately. **Results:** In case of ANC services provided at different health care settings it was observed that services were provided among more numbers respectively in PHC, CHC, DH and Medical College, Hospital and was found to be statistically significant ($X^2=17.24$, $p=0.002$) **Conclusion:** JSY has definitely impacted upon the maternal health by providing health care to pregnant mother during ANC. But it demands some more needful qualitative research to explore the various performance deciding factors to make this scheme more impactful and fruitful.

Key words: JSY; Antenatal care; IFA tablets; TT Immunization.**Introduction**

Worldwide nearly 2,87,000 women between the ages of 15 and 49 die every year as a result of complications arising from pregnancy and childbirth.^{1,2} Experts from WHO, UNFPA, UNICEF, World Bank, the Population Council, International Planned Parenthood Federation and other National and International Agencies concerned with Safe Motherhood reviewed progress over the past 10 years and concluded that it is possible to reduce maternal mortality

significantly with limited investment and effective programme and policy interventions³ In India Janani Suraksha Yojana(JSY)⁴ has been a safe motherhood intervention and modified alternative of the National Maternity Benefit Scheme (NMBS).⁵ It was launched on 12th April 2005 by the Honorable Prime Minister.

This Yojana has been implemented in all states and UTs with special focus on low performing states under the National Rural Health Mission (NRHM)⁶ with objective to reduce maternal, neo-natal mortality

and promote institutional delivery.⁷ In Madhya Pradesh the maternal mortality Rate MMR^{8,9,10} is 269 maternal death per 100000 Live birth (2007-09).^{8,11} In relation to maternal and child health, Madhya Pradesh (MP) holds very bad position. IMR in MP.¹² is 62 infant deaths/1000 live birth (2010), whereas in rural areas of MP it is 67 infant deaths/1000 live birth (2010) which is highest in India. Madhya Pradesh is one of the states classified as Low Performing States (LPS) as well as Empowered Action Group (EAG) states in context to demographic and health status point of views. JSY started in August 2005 in M.P. The JSY has completed more than seven years and midterm evaluation study is demand of time so it was decided to evaluate antenatal care provided under JSY and to know the perception of beneficiaries on quality of care.

Material and Methods: This is health care institute based Observational Cross sectional study carried out at different levels of health care delivery system of Rewa District including 1 PHC, Baikunthpur, 1 CHC Govindgarh, District Hospital, Rewa and Medical college affiliated Hospital i.e. Gandhi Memorial Hospital(GMH), Rewa within duration of one year- October 2012 to September 2013. Total 200 Beneficiary mothers who have delivered at institution within six month duration at the time of data collection and those who were willing to participate were included in the study. For the selection of these 200 beneficiary mothers first of all data from the CMHO office, Rewa was collected and it was found that the prevalence of registered pregnant women who consumed more than 50 IFA tablets was 70% in District Rewa as per previous year data and after application of sample size calculation from $N = 4 p q / L^2$ where L was kept 10% of

prevalence hence minimum number of beneficiary mothers was found 172 , so that to maintain uniformity in sample size from each level of health care settings and for better precision of results the sample size was taken 200. In the study selection of community health center and primary health center, Multistage Random Sampling Method was adopted and for the selection of the beneficiaries from the District hospital and from the medical college affiliated hospital Gandhi memorial hospital, Simple Random Sampling Method was adopted. Hence 50 beneficiaries were selected randomly from each level of health centre so that the total 200 beneficiaries were included in the present study. First of all, District Hospital was selected purposively and 50 beneficiaries from the District Hospital were selected randomly and then one Community Health Centre Govindgarh Community Health Centre out of total 12 CHCs, was selected randomly and the corresponding 50 beneficiaries from the selected Community Health centre were also selected randomly. After selection of CHC, 1 Primary Health Center was also selected randomly out of total 29 PHCs and 50 beneficiaries were selected data was collected with the help of a pre-tested, semi-structured questionnaire based proforma and data was analysed by using epi info 2000 and chi square test was applied appropriately. The record of beneficiaries registered for the year 2012 in HC was also to be seen. Thus to ensure availability and equal representation of beneficiaries 50 registered beneficiaries were selected randomly.

Observation

The beneficiary mothers who were provided less than 4 Antenatal visits were 36 (72%), 34 (68%), 24 (48%) and

21(42%) respectively in PHC Baikunthpur, CHC Govindgarh, DH and GMH (Medical College Hospital). Beneficiary mothers who were provided 4 Antenatal visits, were 14 (28%), 13 (26%), 20 (40%) and 21 (42%) respectively in PHC Baikunthpur, CHC Govindgarh, DH and GMH (Medical College Hospital). And the beneficiary provided >4 ANC were 0 (0%), 3 (6%), 6 (12%) and 8 (16%) respectively in PHC Baikunthpur, CHC Govindgarh, DH and GMH (Medical College Hospital). Hence it was observed that with increasing the level of health care system the number of ANC provided to the beneficiary mothers improved and it was statistically significant ($\chi^2=17.24$, $p=0.002$).

The maximum mothers 6(12%) were found as partially immunized against TT at PHC and minimum were 1 (2%) found at DH and Medical College Hospital). Fully immunized mothers were minimum 44(88%) at PHC. The TT immunization also improved with the increase in health care level. But the difference of TT immunization among different health care levels was statistically insignificant ($p=0.124$). [Table 1]

The beneficiary mothers consuming 0-30 IFA Tablets were 4(8%), 1(2%), 0(0%) and 0(0%) respectively in PHC Baikunthpur, CHC Govindgarh, DH and GMH (Medical College Hospital). Beneficiary mothers consuming 31-60 IFA Tabs were 17(34%), 11(22%), 7(14%) and 3(6%) respectively in PHC Baikunthpur, CHC Govindgarh, DH and GMH (Medical College Hospital). And the beneficiaries consuming 61-100 IFA Tabs were 29(58%), 38(76%), 43(86%) and 47(94%) respectively in PHC Baikunthpur, CHC Govindgarh, DH and GMH (Medical College Hospital). Hence it was seen that the number of IFA Tabs

were consumed more as shifting towards PHC Health care levels to Medical College Hospital levels. The distribution of number of IFA tablets consumed by the beneficiary mothers among different health care levels are found to be statistically significant ($\chi^2=24.46$, $p=0.001$) [Table 2].

Beneficiary mothers (43) who consumed less IFA tablets during antenatal period in district Rewa were 20,14,6 and 3 respectively in PHC Baikunthpur, CHC Govindgarh, DH and GMH (Medical College Hospital). The reason for consuming less IFA tablets as fear of side effects, were 11 (55%), 12 (85.71%), 5 (83.33%) and 3 (100%) respectively in PHC Baikunthpur, CHC Govindgarh, DH and GMH (Medical College Hospital). Other reasons for less consumption of IFA tabs were either not awareness or no advice given to beneficiary mothers in PHC and CHC. [Table 3]

Discussion

Majority of beneficiary mothers (57.5%) received less than 4 Antenatal visits in the district. Most of the registered beneficiary mothers receiving less than 4 Antenatal visits were in rural hospitals viz. PHC Baikunthpur 36(72%), CHC Govindgarh 34(68%) and followed by urban hospitals viz. DH 24(48%), GMH, Medical college Hospital 21(42%). On the other hand beneficiaries receiving 4 or > ANC were found minimum at PHC and increases from the PHC to CHC, DH and GMH ($\chi^2=17.24$, $p=0.002$, statistically significant). This difference of ANC service provided at different health care levels at Rewa could be due to more effective implementation of JSY services at higher centers but equal services should be provided at all centers. The report published by *UNICEF 2012* on Children

health status found that in India 75 % pregnant women received at least 1 ANC visit and 51 % pregnant mother received 4 ANC visits during Pregnancy. Even GOI, Ministry of Health and family welfare department in 2011 also reported the same finding regarding ANC coverage among

pregnant mothers^[11] Coverage Evaluation Survey (CES) in India conducted by UNICEF 2009 reported - 3 or > ANC in 68.7% and Institutional deliveries 72.9% of pregnant mothers. These observations were relatively similar to our present study.^{12,13}

STATUS OF ANC OF BENEFICIARIES FROM DIFFERENT HEALTH CARE LEVELS

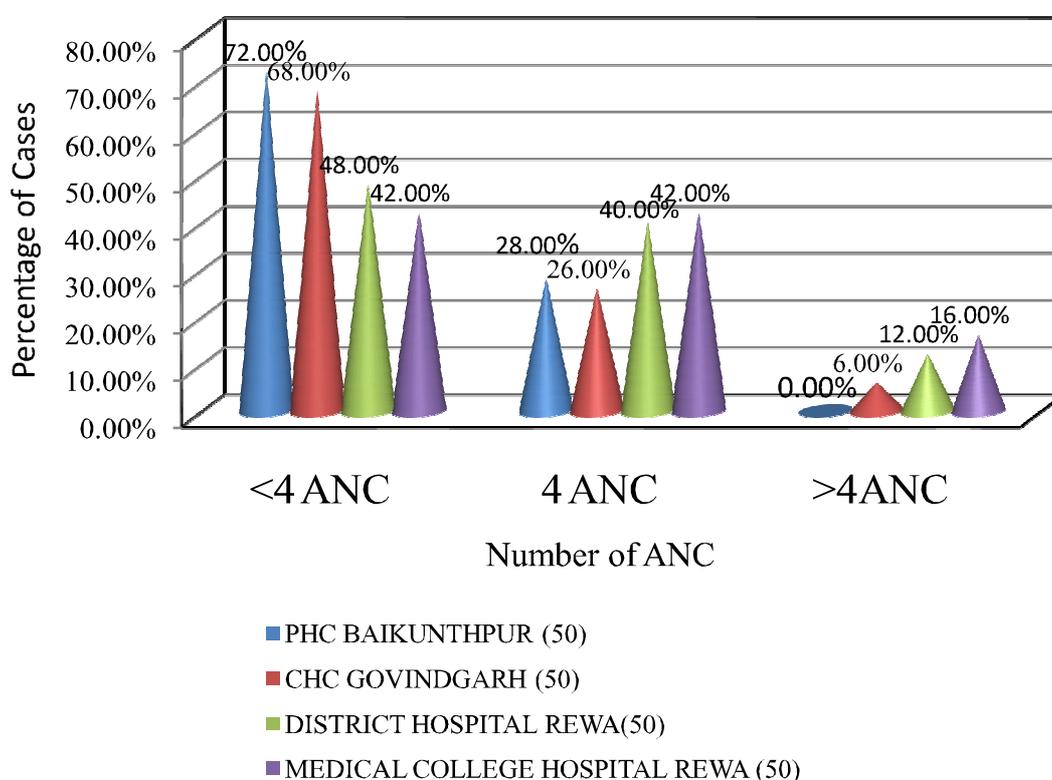


Figure 1: Number of Antenatal Care of Beneficiary Mothers (%) at different Health Care Levels of district Rewa.

Antenatal services of the JSY scheme like full TT immunization etc were also found more among mothers at higher centers (DH and GMH) (49/98%) of health care levels in comparison to PHC (44/88%) and CHC (46/92%).

Similarly the report published by UNICEF 2012 on Children health status found that

in India 87 % pregnant women got TT during Pregnancy. Even GOI, Ministry of Health and family welfare department in 2011 also reported 87% TT coverage in pregnancy. Similarly for iron prophylaxis each woman should receive 100 tablets of IFA during their pregnancy but only 78.5% beneficiaries had received 61-100

IFA tablets and 2.5 percent received 0-30 tablets and 19 percent of beneficiaries received 30-60 tablets during pregnancy. Antenatal care services like providing IFA Tabs to beneficiary mothers were only 0-30 IFA Tabs, maximum from PHC and only one mother was from CHC

but the numbers of such mother were found zero from DH and GMH but in case of more numbers (61-100) of IFA Tabs distribution it was found that maximum mothers 47(94%) were from GMH and minimum 29(58%) were from PHC.

Table 1 : Status of TT immunization of beneficiaries from different health care levels

TT Immunization	Dose	Beneficiaries(N=200)				Total Percentage of Beneficiary Mother (N=200)
		Primary Health Care Level	Secondary Health Care Level		Tertiary Health Care Level	
		PHC Baikunthpur (50)	CHC Govindgarh (50)	District Hospital Rewa(50)	Medical College Hospital Rewa (50)	
Partially immunized	1	6 (12%)	4 (8%)	1 (2%)	1(2%)	12 (6%)
Fully immunized	2/1booster	44 (88%)	46 (92%)	49 (98%)	49 (98%)	188 (94%)
Total						100%
X ² =6.38 p=0.124						

Table 2 : Status of IFA tablets consumed by beneficiaries from different health care levels

No. Of IFA Tablets Consumed	Beneficiaries(N=200)				Total Percentage Of Beneficiary Mother(n=200)
	Primary Health Care Level	Secondary Health Care Level		Tertiary Health Care Level	
	PHC Baikunthpur (50)	CHC Govindgarh (50)	District Hospital Rewa(50)	Medical College Hospital Rewa (50)	
0-30	4(8%)	1 (2%)	0 (0%)	0 (0%)	5 (2.5%)
31-60	17(34%)	11 (22%)	7 (14%)	3 (6%)	38 (19%)
61-100	29(58%)	38 (76%)	43 (86%)	47 (94%)	157(78.5%)
Total					100%
X ² =24.46 p=0.001					

Table 3: Reasons For Low Consumption Of IFA Tablets by Beneficiaries(N=86) from Different Health Care Levels

Reason	Beneficiaries(n=86)				Total Percentage of beneficiary mother (n=43)
	Primary Health Care Level	Secondary Health Care Level		Tertiary Health Care Level	
	PHC Baikunthpur	CHC Govindgarh	District Hospital Rewa	Medical College Hospital Rewa	
Less IFA Tablets received	20	14	6	3	43(100%)
No advice given	5	1	1	0	7(16.28%)
Not aware	4	1	0	0	5(11.62%)
Fear of Side Effects (nausea and headache etc.)	11	12	5	3	31(72.10%)

Hence it was seen that the number of IFA Tabs were consumed more as shifting from PHC Health care settings to Medical College Hospital Settings ($X^2=24.46$, $p=0.001$, statistically significant). This distribution could be due to more focusing of JSY services at the higher level of health care levels in comparison of PHC or CHC or it could be due to more stocks being maintained at DH/GMH or it may be due to recall bias that can affect the counting of tablets of IFA among the beneficiaries from different health care institution. (Table 2)

This type of distribution of services among various health care levels need reorientation of JSY services .Other studies like Gupta S.et al (2008) found 96.14 mothers were fully immunized against tetanus. He also observed that 48.2% beneficiary mothers received 50-100 IFA tablets and 48% received less than 50 IFA tablets.¹³ Mahawar P., Anand

Shweta et al.(2008-09)conducted a Cross-sectional study in Indore district and observed 138 (55.2%) had three antenatal checkups. All the beneficiaries consumed iron and folic acid tablets (IFA) during pregnancy and received two tetanus toxoid injections while in our study 42.5% had four or more than four ANC's while other observation are almost similar.¹⁴

Singh and Yadav et al.(2000) conducted a study to assess the antenatal care of pregnant women including immunization status. About 19,000 pregnant mothers were surveyed. About 89% of pregnant women had antenatal visits and 62% had made 3 or more ANC visits. There were about 11% pregnant women who had no ANC visit at all. while our study is among registered institutional deliveries in hospitals and all beneficiary mothers had ANC's but only 42.5% had made 4 or > 4 ANC visits . In our study information was collected regarding 4 or > 4 ANC's. If the

data is taken for 3 or > 3 ANC's, findings may be similar.¹⁵ Pal D.K. et al found 89% beneficiaries have received two doses of TT¹⁶ More or less same (around 100%) was found in Health bulletin of M.P. 2007-08.¹⁷

These observations are similar to our study with slight variations due to increase in institutional deliveries and awareness after implementation of JSY. Gupta S. et al (2008) found 95% beneficiary mothers were registered and 59% mothers received 3 ANC. And 96.14 mothers were fully immunized against tetanus. These observations are similar to our study. Health services utilization in urban area is more as compared to rural area. He also observed that 48.2% beneficiary mothers received more than 50-100 IFA tablets and 48% received less than 50 IFA tablets. Only 34.7% beneficiary mothers consumed >50 IFA tablets.

The difference may be due to the fact that our study is among registered Institutional deliveries and awareness for health.¹⁸ Pal D.K. et al found 88% of beneficiaries of Janani sehyogi yojana were having 3 ANC checkups.¹⁶ In *Health bulletin of M.P. 2007-08* it was around 32.87% mothers who got 3 ANC checkups. So ANC coverage is still less in JSY may be because mothers come to know late about their pregnancy or may be lack of awareness about importance of ANC checkups and lack of motivation by the local health workers and family members.¹⁷

Conclusion

Evaluation of JSY is being done time to time in every state but evaluation of ANC at different level of health care delivery settings is a demand of time so that proper feedback from the site of implementation can be collected and the exact lacunas can be identified and hence rectified. JSY has

definitely impacted upon the maternal and child health by providing health care to pregnant mother during ANC. It demands some more needful qualitative research to explore the various performance deciding factors and to act upon these factors will definitely make this scheme more impact and fruitful.

Recommendations:

- 1) The target beneficiaries must be made aware about the JANANI SURAKSHA YOJANA and its benefits. This can be done by various IEC activities.
- 2) Four antenatal checkups should be given top priority and the mother should be motivated and counseled regarding antenatal care, TT immunization

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