

# Utilization of Health Services under Janani Suraksha Yojna in Rural Haryana

## Abstract

**Objective:** To study the utilization of health services by mothers during antenatal, natal and post-natal period under Janani Suraksha Yojna (JSY). **Materials and Methods:** This cross-sectional study was conducted in rural areas of two districts of Haryana as per the rate of institutional deliveries. A total of 48 sub-centers were selected by multistage random sampling. 1386 JSY beneficiary mothers were interviewed by house-to-house visits, after obtaining informed consent. **Results:** Majority 1216 (87.5%) of the study subjects were registered between 12-26 weeks of pregnancy whereas only 170 (12.3%) of them were registered within first 12 weeks. Around one-fourth of the mothers did not receive the recommended minimum three antenatal check-ups. The coverage of TT immunization was 92.1%. Majority 1253 (90.4%) of the deliveries were institutional. More than three-fourth of the home deliveries were conducted by trained *dais* and 15% of the home deliveries were conducted by untrained persons. Out of the 1253 institutional deliveries, 84.6% were conducted in Government institutions while 15.4% deliveries were conducted in Private hospitals. About two-third mothers received at least three post-natal care visits by the health functionaries. **Discussion:** Janani Suraksha Yojna is an ambitious scheme serving as a safe motherhood intervention under NRHM. It has been fairly successful in promoting institutional deliveries but the key components of Essential Obstetric Care i.e., early antenatal registration, minimum three antenatal care visits, three post-natal care visits still need strengthening.

**Key words:** Antenatal check-up, institutional delivery, Janani Suraksha Yojna, post-natal care

Jagbir Singh Malik,  
Meenakshi Kalhan,  
Anita Punia<sup>1</sup>,  
Sandeep Sachdeva,  
Binod Kumar Behera<sup>1</sup>

Departments of Community  
Medicine, Pt. B. D. Sharma Post  
Graduate Institute of Medical  
Sciences, Rohtak,

<sup>1</sup>Community Medicine, BPS  
Government Medical College for  
Women, Khanpur Kalan, Sonapat,  
Haryana, India

### Address for the Correspondence:

Dr. Binod Kumar Behera,  
Department of Community  
Medicine,  
BPS Government Medical  
College for Women, Khanpur  
Kalan, Sonapat, Haryana, India.  
E-mail: drbinodkumar1980@gmail.  
com

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## INTRODUCTION

Janani Suraksha Yojna (JSY) is an ambitious scheme serving as a safe motherhood intervention and was launched under National Rural Health Mission (NRHM) on 12<sup>th</sup> April 2005.<sup>[1]</sup> It was proposed by way of modifying the then existing National Maternity Benefit Scheme (NMBS). It is a cash incentive-based program to promote institutional deliveries. The main objective of this scheme is to reduce maternal and neo-natal mortality. It also makes available quality maternal care during pregnancy, delivery and in the immediate post-partum period along with appropriate referral and transport assistance. According to Sample Registration System (SRS) (2007-09), the maternal mortality ratio (MMR) of India is 212 per lac live births while that for Haryana is 153. Only three states (Kerala, Tamil Nadu, and Maharashtra) have yet achieved the Millennium development Goals target of 109.<sup>[2]</sup> The infant mortality rate (IMR) of India was 47 during 2010. However, states/UTs of Assam, Bihar, Chandigarh, Haryana, Rajasthan, Meghalaya have IMR more than the national average.<sup>[3]</sup>

NRHM has categorized Haryana among the high-performing states, so the scheme is intended for all women 19 years and above, up to two live births, belonging to below poverty line families and all scheduled caste or scheduled tribe women. Since the JSY scheme has been operational for over 5 years, and no other evaluation study has been conducted in Haryana, it was found appropriate to review and assess the performance of this scheme in this state. The findings may be helpful in strengthening the program implementation.

## Objective

To assess the utilisation of health services during antenatal, natal and post-natal period among JSY beneficiaries.

## MATERIALS AND METHODS

This cross-sectional study was conducted in two districts of Haryana. As per district level household survey-3 (DLHS-3) report 2007-08, all the districts were classified into three categories based upon percentage of institutional deliveries: Low performing (less than 45%), moderately performing (45-60%) and high performing (more than 60%). District Rewari and Panipat were randomly selected from high and low-performing districts, respectively. From each community health center (CHC) of the districts, two primary health centers (PHC) were selected and from each PHC, two sub centers were selected randomly. For the study purpose, in all 48 sub centers were selected by multistage random sampling. List of mothers who delivered during last one year (Jan-Dec 2010) was obtained from the multipurpose health workers-female (MPHW-F) and only those entitled under JSY scheme were contacted by the investigators during house to house visits. Eligible beneficiaries under JSY were interviewed on a pre-designed, pre-tested, semi-structured schedule. Data was entered in Microsoft Excel 2010 spreadsheet and was analysed using statistical package for social sciences (SPSS) version 17 by applying appropriate statistical tests.

### Ethical clearance

The present study was undertaken after taking ethical clearance from the Institutional Ethics Committee of Pt. B. D. Sharma PGIMS, Rohtak.

## RESULTS

A total of 1386 mothers were interviewed by the investigators. Majority of the study subjects were in the age group of 20-25 years i.e. 1079 (77.8%) followed by 279 (20.1%) from age group 26-30 yrs as shown in Table 1. In the present study 1104 (79.6%) study subjects belonged to scheduled caste followed by 239 (17.2%) backward caste and 43 (3.1%) general caste. Around one-fourth of the study subjects were illiterate, while around two-third were educated up to high school. Only 36 (2.6%) were graduate and above. However, two-third of husbands were educated up to high school and 132 (9.5%) were illiterate. Majority of the study subjects were house-wives 1284 (92.6%) followed by laborers as shown in Table 1. About two-third of the husbands of study subjects were laborers (63.8%) followed by those engaged in private job and shopkeeper. Majority of the study subjects were registered between 12-26 weeks of pregnancy i.e., 1216 (87.7%) whereas only 170 (12.3%) of them were registered within 12 weeks. Sub-center has higher registration of pregnancies i.e., 81.6%, in comparison to PHC (17.1%) and CHC (1.5%). Around one-fourth of mothers did not even receive the recommended minimum three antenatal check-ups. Weight measurement, which is also considered as an essential component of ANC, was done in two-third mothers during all ANC visits as shown in Table 2. Majority of the mothers (97.4%) received 100 tablets of IFA, however less than half (45.3%) of them consumed all the tablets. Out of 1386 mothers 1253 (90.4%) delivered in one or the other type of health institution. The place of delivery of JSY beneficiaries is shown in Table 3. Out

**Table 1: Demographics of the study subjects**

Socio demographic factors	Panipat	Rewari	Total
Age group (yrs)			
<20	1 (0.1)	4 (0.6)	5 (0.3)
20-25	489 (71.5)	590 (84.0)	1079 (77.8)
26-30	177 (25.9)	102 (14.5)	279 (20.1)
31-35	11 (1.6)	4 (0.6)	15 (1.0)
>35	6 (0.9)	2 (0.3)	8 (0.5)
Educational status			
Illiterate	214 (31.3)	140 (20)	354 (25.5)
Primary	196 (28.7)	240 (34.2)	436 (31.5)
High school	238 (34.8)	265 (37.7)	503 (36.3)
Senior secondary	23 (3.4)	34 (4.8)	57 (4.1)
Graduation and above	13 (1.9)	23 (3.3)	36 (2.6)
Occupation			
House-wife	653 (95.5)	631 (89.9)	1284 (92.6)
Laborer	18 (2.6)	47 (6.7)	65 (4.6)
Others*	13 (1.9)	24 (3.4)	37 (2.6)
Total	684 (100.0)	702 (100.0)	1386 (100.0)

\*includes ASHA worker, anganwadi worker/helper, private, and government job holders. Figures in parenthesis show percentages

**Table 2: Utilization of antenatal care services by study subjects**

Components of ANC	Panipat	Rewari	Total	
Month of registration				
<12 wks	37 (5.4)	133 (18.9)	170 (12.3)	$\chi^2=59.46$
>12 wks	647 (94.5)	569 (81.1)	1216 (87.7)	df=1 P<0.05
No. of ANC visits				
<3	273 (39.9)	54 (7.7)	327 (23.6)	$\chi^2=203.97$
3	236 (34.5)	337 (48.0)	573 (41.3)	df=2 P<0.05
>3	175 (25.6)	311 (44.3)	486 (35.1)	
Weight measured				
At all the visits	524 (76.6)	400 (57.0)	925 (66.7)	$\chi^2=20.94$
During some visits	125 (18.3)	294 (41.9)	418 (30.2)	df=2 P<0.05
None	0	1 (0.1)	1 (0.1)	
TT received				
TT <sub>1</sub>	6 (0.9)	103 (14.7)	109 (7.8)	$\chi^2=0.97$
TT <sub>2</sub> /Booster	678 (99.1)	598 (85.2)	1276 (92.1)	df=1 P>0.05
Total	684 (100.0)	702 (100.0)	1386 (100.0)	

Figures in parenthesis show percentages, ANC=Antenatal care

**Table 3: Place of delivery among JSY beneficiaries**

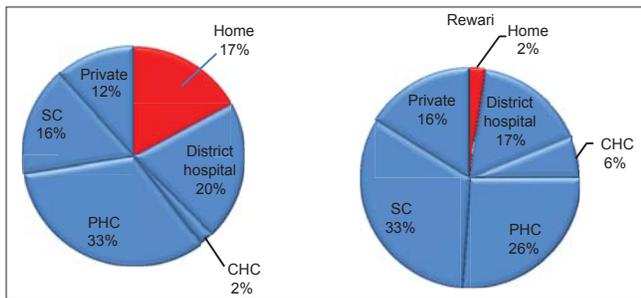
Place of delivery	Panipat	Rewari	Total
Home	117 (17.1)	16 (2.3)	133 (9.6)
District hospital	139 (20.3)	116 (16.5)	255 (18.4)
CHC	15 (2.2)	43 (6.1)	58 (4.2)
PHC	224 (32.7)	184 (26.2)	408 (29.4)
SC	110 (16.1)	229 (32.6)	339 (24.4)
Private	79 (11.5)	114 (16.2)	193 (13.9)
Total	684 (100.0)	702 (100.0)	1386 (100.0)

Figures in parenthesis show percentages, JSY=Janani Suraksha Yojna, CHC=Community health center, PHC=Primary health centers, SC=Sub-center

of the 1253 institutional deliveries, 1060 (84.6%) were conducted in govt. institutions while 193 (15.4%) in private hospitals. Figure 1 shows that in district Panipat 17% of the study subjects delivered at home whereas in Rewari only 2% delivered at home. Table 4 shows that more than three-fourth i.e., 101 (75.9%) of the home deliveries were conducted by trained *dai* while MPHWF conducted 12 (9.0%) of home deliveries, rest 20 (15.0%) deliveries by untrained persons. Table 5 shows that 1348 (97.3%) study subjects received at least one post-natal care (PNC) visit. About one-third study subjects received less than three PNC visits. Majority of mothers i.e., 1345 (97.1%) received PNC by ANM/ASHA while 8 (2.7%) did not receive any post-natal care.

## DISCUSSION

India has implemented one of the largest conditional cash transfer programs, JSY to improve maternal and child health status. During the present study, data of 1386 subjects in two study districts of Haryana revealed that 90.4% of JSY beneficiaries delivered in one or the other type of health institutions whereas National Family Health



**Figure 1:** Distribution of mothers according to place of delivery

Table 4: Assistance for delivery at home			
Person providing assistance	Panipat n=117	Rewari n=16	Total n=133
MPHW (F)	10 (8.5)	2 (6.25)	12 (9.0)
Trained <i>Dai</i>	89 (76.1)	12 (75.0)	101 (75.9)
Elderly women/Relative	3 (2.6)	2 (12.5)	5 (3.7)
Any other*	15 (12.8)	0	15 (11.3)

\*Any other includes untrained *dai*, ASHA worker, Anganwadi worker, etc., Figures in parenthesis show percentages, MPHWF= Multipurpose health workers-female

Table 5: Post-natal care received by JSY beneficiaries			
Component	Panipat	Rewari	Total
PNC provided by			
None	26 (3.8)	12 (1.7)	38 (2.7)
ANM/ASHA	658 (96.2)	687 (97.9)	1345 (97.1)
<i>Dai</i> /AWW	0	3 (0.3)	3 (0.2)
No. of PNC visits			
None	26 (3.8)	12 (1.7)	38 (2.7)
1-2	176 (25.7)	301 (42.9)	477 (34.4)
≥3	482 (70.5)	389 (55.4)	871 (62.8)
Total	684 (100)	702 (100)	1386 (100)

Figures in parenthesis show percentages, PNC=Post-natal care, JSY=Janani Suraksha Yojna

Survey-3 (NFHS-3) reported, overall rate of institutional delivery in Haryana as 39.4% (Urban 66.7%, Rural 30.3%).<sup>[4]</sup> A number of national surveys and provincial data sources have demonstrated a steep increase in institutional deliveries both nationally and state-wise since the inception of the JSY program.<sup>[5,6]</sup> Lim *et al.*, analysed the secondary data and reported that the JSY program resulted in 43.5% increase of institutional deliveries.<sup>[7]</sup> Sharma *et al.*, also reported an increase in institutional deliveries following implementation of JSY at different levels of health care in Jaipur District, Rajasthan, but the quality aspects of these institutional deliveries were far from desired levels.<sup>[8]</sup> A community based cross-sectional study in Ujjain district, Madhya Pradesh, by Sidney *et al.*,<sup>[9]</sup> found that 89% of the women had an institutional delivery, out of which 70% deliveries occurred in a CHC and 26% in the district hospital, whereas in the present study maximum number of deliveries were conducted in PHC i.e., 29.4%. The difference in preference of institution for deliveries may be due to difference in available facilities at those institutions. In the present study poor early antenatal registration was observed i.e., only 12% among the study subjects. This can be attributed to the lack of knowledge for early registration among rural women folk. Two-third of the study subjects completed the minimum recommended three ANC visits, whereas Mandal *et al.*,<sup>[10]</sup> in their study in South 24-Parganas district of West Bengal found that 57% mothers were registered with health services within 12 weeks of pregnancy and 86% mothers completed at least three ANC visits. Panja *et al.*,<sup>[11]</sup> also found that 90% of the pregnant mother received minimum three antenatal care checkups in rural and urban clusters. This difference in observation may be attributed to study setting and sampling methodology. Health functionaries particularly MPHWF, ASHA, and Anganwadi workers need to be sensitised to ensure timely registration and referral of high-risk pregnancies.

Although two-third mothers completed three ANC visits and 92% of them received two doses of tetanus toxoid, weight was measured among 66% mothers which is less than expectation. Mandal *et al.*,<sup>[10]</sup> in their study reported 97% one dose TT coverage, 85.9% received three antenatal visits and weighing was done in 88% mothers. Panja *et al.*,<sup>[11]</sup> reported that around 97% of the mothers received adequate tetanus prophylaxis. In the present study, the proportion of deliveries conducted in SC, PHC, CHC and district hospitals were 24.4%, 29.4%, 4.2%, and 18.4%, respectively, accounting to 90.4% institutional delivery, the possible reason may be availability of govt. health institutions in rural areas rather than private hospital. In contrast to present study findings, Sidney *et al.*, found 70% of the institutional deliveries conducted at CHC and 26% at district hospital. Study carried out by UNFPA in five states reported that the rate of institutional delivery at PHC in Bihar, Odisha, and Madhya Pradesh was 70%, 58%, and 42% respectively. While in the state of Uttar Pradesh and Rajasthan around 44-47% of the deliveries were reported in CHCs and these two states also witnessed deliveries taking place in the PHCs to the tune of 29 and 37%, respectively.<sup>[12]</sup> The difference may be due to the availability and difference in preference for the health institutions in the above states. Proportion of home deliveries in present study was 9% which is almost similar to that reported from

a study in Odisha where only 8% of JSY beneficiaries delivered at home<sup>[13]</sup> In the present study, around 14% of the JSY beneficiaries' preferred private hospitals for their deliveries comparable to a study in Bankura District of West Bengal where it was 11%.<sup>[10]</sup> Moreover as this study was conducted in rural area (particularly lower socio economic group) where access, availability, and affordability may restrain the utilization of private hospital. The present study revealed that 63% of the mothers got three or more post-natal checkups done which should have been 100% irrespective of the place of delivery to reduce the morbidity and mortality in that period.

## Recommendations

Study findings indicate an increase in institutional deliveries in both the low-performing and high-performing districts of Haryana and this can be attributed to the immense popularity of the JSY scheme. However, in order to reach the stated goal of 100% institutional deliveries, capacity buildings need to be strengthened in health systems to cater to this JSY-induced demand. JSY is not only about promoting institutional deliveries but also for reduction of maternal mortality and morbidity which can only be achieved by providing quality antenatal/delivery and post-partum care services. Hence, it is proposed to make the quality of services an integral component of JSY scheme. Continuous monitoring of service providers' need to be emphasized by the program managers to ensure and improve quality of health services under JSY.

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