

Research Article

Evaluation of availability and utilization of obstetric care services and entitlements under Janani Suraksha Yojana in Mysore, India

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ABSTRACT

Background: To reduce maternal and infant deaths due to preventable causes by promoting institutional delivery, conditional cash transfer scheme, Janani Suraksha Yojana (JSY) program was launched in India. The aim of the study was to assess the availability and utilization of obstetric care services and monetary benefits under the scheme by pregnant women, completeness of services and timeliness of sanction of cash incentives and its effect on institutional deliveries in the study area. Design of the study was community based cross-sectional survey.

Methods: Mixed method research done in four Primary Health Centre (PHC)s selected by stratified random sampling method using survey and Focussed Group Discussion methods. Statistical analysis was univariate and bivariate analysis using SPSS.

Results: Among 510 mothers interviewed, registration of pregnancies was 100% and 99.6% mothers had more than three ANC check ups. Institutional delivery rate was 98.8%. Among the 484 scheme eligible, 385 (79.5%) had got JSY money. Reason for not getting the money were, lack of documents, bank accounts, not linking UID (Aadhar) number to the bank account and delay was due to shortage of funds in the PHC.

Conclusions: CPSMS was the major method of disbursement (65%). Most of the mothers got money after three to four months delay. 63% of the study participants in the study area had got full range of obstetric care services recommended through JSY.

Keywords: Janani Suraksha Yojana, Evaluation, Community based, Mysore

INTRODUCTION

Ongoing social and health reforms in India are improving national health indicators slowly. Infant mortality rate (IMR) has been brought down to 40 per 1000 live births, and MMR 178 per 100000 live births.^{1,2} Still there is lot of scope for improvement as many children and mothers die from preventable causes.

On an average, an Indian family spends Rs.4502 in urban areas and Rs.2224 in rural areas for childbirth.³ S Mukharji observed that after adjusting for out-of-pocket maternal health care expenditure, the poverty increased by 20% in urban and 19% in rural areas.³

Janani Suraksha Yojana (JSY) scheme is launched under National Rural Health Mission (NRHM) to reduce infant

and maternal mortality by promoting institutional obstetric care utilization through conditional cash transfer. It entrusts ASHA (Accredited social health activist) with responsibilities to identify pregnant women and help her till immunization of her child.⁴

Under this scheme in the study area, below poverty line families and couples of scheduled caste and tribe are eligible for monetary benefit of Rs. 700 for normal delivery and LSCS at government hospitals and Rs. 1500 for LSCS at recognized private hospitals.⁵ The monetary benefit is to take care of the expenses towards transportation, admission, hospital stay and immediate postnatal care. Ideally this amount is to be sanctioned within two days of delivery.⁶ This study was done to evaluate this program for its availability and utilization in Mysore.

Objectives

- To assess the availability of obstetric care services and monetary benefits to pregnant women eligible for JSY scheme.
- To assess the utilization of Obstetric care services and monetary benefits provided to the pregnant women under JSY scheme.

METHODS

Study design and setting: Cross sectional mixed method community based health service research done in Four PHC areas of Mysore during July to October 2014.

Selection of study villages: Multistage stratified random sampling method was used to cover 128 PHCs of Mysore District. First stage stratification of PHCs in study area was done based on percentage of mothers disbursed with JSY money in previous year, as representation was desired from PHCs with varying performance in JSY implementation. PHCs thus categorized into high, average and low performing, were again classified based on their MCH indicators as shown in Table 1, and cumulative score was used to select three PHCs from 95 non tribal PHCs representing high (Udbhuru), average (Hedthale) and low (Madapura) performing PHCs. One PHC with highest tribal population among 33 tribal PHCs was selected (B Matkere).

Table 1: Scoring system for stratification of PHCS and for their selection.

Criteria (values for the year 2013-14)	1	2	3
ANC registration (%)	<75	75 to 90	>90
Early ANC registration (%)	<75	75 to 90	>90
Low birth weight (LBW) rate (%)	>5	05 to 2	<2
Infant mortality rate (per 1000 live births)	>30	30 to 10	<10
Percentage of mothers who got JSY benefit	<25	25 to 50	>50

Study participants

Mothers who had delivered between January 1st to December 31st of 2013 and belonged to the study area were interviewed.

Sample size

All the mothers satisfying the inclusion criteria in the study area were included, which formed a sample size of 510.

Study instruments

Semi-structured pretested questionnaire in local language was used after validation by translation and back-translation method. Discussion key was used during FGDs.

Data collection

During the house to house survey by trained Medico Social Workers using questionnaire, mothers were interviewed and MCH tracking (Thayi) card and other hospital records were referred wherever available to get details regarding sociodemographic details, obstetric care and bank passbook or JSY acknowledgement for monetary benefit details.

Further details regarding MCH care, challenges for scheme implementation were collected using focused group discussions (FGD) with ASHA workers in the PHC area.

Study definitions

‘Availability’- ‘provision of a hospital with qualified doctor to provide obstetric services within a distance of 25km from the mother’s village and ANM or ASHA worker to help mothers in getting the obstetric care, implementation of JSY monetary benefit scheme in the area’.

‘Completeness’- was defined using a checklist of services to be provided to pregnant mothers and the baby.⁷

Statistical analysis

Data was entered into excel sheet and analysed using SPSS 22.1 software. Univariate analysis included proportion, mean and standard deviation, median range of the variables. Bivariate analysis was done using student t test to find the difference in mean values. Focus group discussion (FGD) findings of four PHCs were summarised according to grounded theory.

Ethical issues

Ethical clearance for the study was obtained from Institutional ethical committee of JSS Medical College,

Mysore. Informed written consent of each mother was obtained before starting the interview. FGD was conducted after taking informed verbal consent from the ASHA workers.

RESULTS

Three nontribal PHCs selected for the study covered 59319 people in 40 villages and tribal PHC had a population of 9395 in its seven villages and 25 hamlets. 510 mothers in the study area satisfied the inclusion criteria and all agreed to participate in the study.

Most of the study participants belonged to 18 to 25 years age group. Mean age at marriage and mean age at first pregnancy were 18.8 ± 2.2 and 20.1 ± 2.5 respectively. 11.4% and 16.3% mothers had married before the age of 18 years and conceived before 19 years respectively.

90% of the mothers had a hospital with labour facility within 15kms distance; out of these hospitals 77% had LSCS facility. Villages in the study area had good vehicle connectivity other than 108 ambulances. Few tribal hamlets were not having connecting motorable road. All PHCs had implemented the JSY scheme. Among 510 mothers interviewed 484 were eligible for JSY monetary benefits. 332 (68.5%) belonged to Scheduled caste or tribe and remaining 152 (31.5%) were from below poverty line (BPL) families.

Registration of pregnancies was 100% in the study area, 97% had registered within 12 weeks of gestation and 99.6% mothers had more than three ANC checkups. Institutional delivery rate was 98.8% with a greater proportion (81.7%) delivering in Govt hospitals with the help of doctors (96.4%). More than two thirds of these mothers utilized 108 (free government) ambulance services. ASHA had accompanied 96% of the mothers to hospital.

Table 2: Profile of PHCs selected for the JSY scheme evaluation.

	PHC Udbhuru (High performing)	PHC Hedthale (Average performing)	PHC Madapura (Low performing)	PHC B. Matkere (Tribal area)	Total
Population	14808	26525	17986	9395	68714
Number of villages	03	22	15	32 (20 hamlets)	72
Distance from district headquarters	15	40	45	90	-
Medical officer	01	In charge MO visits twice weekly	01	01	03
ANMs	03	03	04	01	11
ASHAs	10	22	15	08	55
Number of live births among participants	141	205	100	64	510

Table 3: Distribution of study participants according to of obstetric profile in study PHCs.

Particulars	PHC Udbhuru (High performing)	PHC Hedthale (Average performing)	PHC Madapura (Low performing)	PHC B. Matkere (Tribal area)	Total
Mean Age of the study population	23.4 ± 2.8	23.3 ± 3.2	22.8 ± 2.6	22.4 ± 2.8	23.1 ± 2.9
Mean Age at marriage (SD)	18.8 ± 2.3	19.1 ± 2.8	18.6 ± 1.3	18.4 ± 1.0	18.8 ± 2.2
% of mothers married before 18 years	16.3	13.2	4.0	6.3	11.4
Mean Age at first pregnancy	20.1 ± 2.5	20.5 ± 3.0	19.6 ± 1.3	19.9 ± 2.3	$20.1 \pm .5$
% of mothers with 1 st pregnancy before 19 yrs	21.3	18.0	8.0	12.5	16.3
Primiparous women (%)	59 (41.8)	99 (48.3)	47 (47.0)	42 (65.6)	247 (48.5)

Among the eligible, 385 (79.5%) had got the JSY benefits. Four mothers with more than two live births had got JSY money. Less than one percent of mothers got money at the hospital. Most got it after a median delay of 120 days (Q1, Q3 is 60, 180 days). Nearly two thirds were transferred through the recommended, online money transfer i.e. Centralized plan scheme monitoring

system (CPSMS). The reason for not getting the money even though they were eligible, as told to the mothers were, not having the bank account (17.5%), not submitting Universal Identification (Aadhar) number to bank or other documents to PHC(16.5%), shortage of funds in the PHC (46%), death of the baby during infancy (5%) and others (15%).

Table 4: Distribution of study participants according to obstetric care service utilization in different PHCs.

Particulars	PHC Udbhuru (High performing)	PHC Hedthale (Average performing)	PHC Madapura (Low performing)	PHC B. Matkere (Tribal area)	Total
Number of Institutional deliveries	137 (97.2%)	205 (100%)	100 (100%)	63 (98.4%)	505 (98.8%)
Type of facility where delivery was conducted (N=505)					
Government	111 (81.0%)	189 (92.1%)	93 (93%)	20 (31.7%)	413 (81.7%)
Private	26 (19%)	16 (8.9%)	7 (7%)	43 (68.3%)	92 (18.3%)
Mode of delivery(N=510)					
Vaginal	120 (85.1%)	169 (82.4%)	87 (87%)	56 (87.5%)	432 (84.7%)
LSCS	21 (14.9%)	36 (17.6%)	13 (13%)	8 (12.5%)	78 (13.3%)
Mode of transport used for delivery (N=505)					
108 ambulance	116 (84.6%)	124 (60.4%)	73 (73.0%)	46 (73.0%)	359 (71.0%)
Other vehicles	21 (15.4%)	81 (39.6%)	27 (27%)	17 (27%)	146 (29%)
Did ASHA accompany to delivery					
Yes	128 (93.4%)	203 (99.0%)	95 (95%)	59 (93.6%)	485 (96.0%)
No	9 (6.4%)	2 (1%)	5 (5%)	4 (6.4%)	20 (4%)
Person conducting the delivery (at hospital)					
Doctor	128 (92.7%)	100 (100%)	199 (97.0%)	61 (95.0%)	487 (96.4%)
Nurse	13 (7.3%)	0	6 (3%)	2 (3.5%)	18 (3.2%)

Table 5: Distribution of study participants according to disbursement of JSY monetary benefit in the study area.

Particulars	PHC Udbhuru (High performing)	PHC Hedthale (Average performing)	PHC Madapura (Low performing)	PHC B. Matkere (Tribal area)	Total
Number of mothers eligible for JSY money (upto 2 live births)	127 (90%)	198 (96.5%)	96 (96%)	63 (98.5%)	484 (94.9%)
Eligible mothers who got JSY money	106 (83.5)	145 (73.2%)	77 (80.2%)	57 (90.5%)	385 (79.5%)
Duration for getting the monetary benefit in days					
Median (Range)	120 (1-365)	90(36-305)	150 (60-155)	150 (60-335)	120 (1-365)
Mode of payment received					
CPSMS*	57 (52.8%)	115 (78.3%)	(88.3%)	12 (21.1%)	251 (64.8%)
Cheque	51 (47.2%)	30 (20.4%)	9 (11.7%)	45 (78.9%)	135 (34.7%)
Cash	0	2 (1.4%)	0	0	2 (0.5%)

* Centralized plan scheme monitoring system

63% of the study participants and 66.5% of the mothers who were eligible for JSY had got complete services as per recommendation. There was higher incidence of prematurity ($P=0.14$), low birth weight ($P=0.057$) and

mortality ($P=0.06$) among the incompletely served group, though it was not statistically significant.

FGDs reported that intranatal care was good in most of the utilized hospitals. Utilization of Govt hospital was

maximum for delivery in all the PHCs except tribal PHC, where NGO run hospital was preferred more. There were few complaints regarding harsh behaviour of group D workers and nursing staff in the district hospital. Registration at district hospital took upto 30 mins, during which mother had to wait outside the labour room. ASHAs accompanying mothers were not allowed into district hospital labour complex which made the initial experience more frightening for mothers. Incidences of money being demanded from mothers by nurses in district and Taluka hospitals were reported. Doctors expected money for LSCS in few Taluka hospitals. ASHAs incentive for her participation in the scheme was sanctioned regularly in their monthly meetings. Inadequacy of basic facilities for their accommodation at the hospital discouraged them from staying in the hospital till mother's discharge. ASHAs opined that though the awareness about JSY and its utilization are high, the money sanctioned is not being used for the maternal care. In many families husband draws the money and utilizes for his needs (alcohol in case of tribal area).

DISCUSSION

Obstetric care services provided to the mothers in the study area had high coverage. In the present study mother's literacy rate was nearly 80% which could be one of the reasons for high coverage. Child marriage practices were confirmed during the FGDs. In tribal mothers most were child marriages as they follow their own social norm.

Present study observed complete and early registration of pregnancy, which is result of efforts of ASHAs, who track newly married women for pregnancy. As reported during FGDs, people in this region hesitate to reveal about pregnancy till three months as they believe in "evil eye" effect leading to miscarriages. Early registration shows people's confidence in ASHAs.

In tribal areas of Mysore only 66% of the mothers was living in vehicle accessible hamlets during 2010-12 as found by SVYM study.⁸ In the present study 71% of the mothers had utilized 108 ambulances which could be called over phone. As ASHAs recollected during the FGD, during a strike of 108 ambulance drivers, these taxi drivers cancelled other trips and attended to the calls of ASHAs.

96% of the mothers were accompanied by ASHAs to the delivery and most had stayed in the hospital till mother was shifted to the ward. Mukhyopadhyay and Deoki Nandan had observed non availability of ASHAs and other paramedical staff as a reason for decreased awareness and utilization of the JSY.^{7,9}

Higher numbers of deliveries were conducted by doctors in the study area as more than 60% of the deliveries among study subjects happened in Cheluvamba hospital which is attached to Mysore Medical College having Post

Graduates posted in labor room 24x7. Other taluka hospitals and CHCs had gynaecologists. NGO hospital in tribal area had a gynaecologist and trained BAMS doctors round the clock.

Among the 484 eligible, 385 mothers had got JSY money. According to Modugu and Lim, during 2006-07 national average for the utilization of JSY was 6% which ranged from 5% to 44%.^{10,11} In tribal areas of Mysore, during 2011-12 only 69% of those submitted the necessary documents had got the benefit.⁸ This improved beneficiary rate could be due to change in socioeconomic background of the study areas and increasing awareness with the time.

Median delay in study area was 120 days. Health workers maintain a seniority list and money is disbursed accordingly when sanctioned to PHC. FGD revealed that repeated effort to transfer money through CPSMS had resulted in delay. ASHAs in all the areas felt, cheque was the ideal method and the delay has increased since the CPSMS method was implemented. The reason for this was probed with both the PHC staff and Bank officials. On enquiring the issue bank officials said software was very well developed but the problems occur when there is typographic disparity between the name in bank account and CPSMS data (sent from PHCs). The same was conveyed to the PHC staff and they acknowledged that they didn't know this and agreed that such differences were present.

Delay in money disbursement varied from seven days to six months in Jarkhand and Orissa.^{5,7} Major reasons for delay was lack of funds, delay in producing documents, lack of awareness in many parts of the country including the study area.^{7,8,10}

The amount transferred was not meeting the expenses of frequent trips to PHC and Bank. ASHAs also said that people open account with minimum or nil balance. After the money is transferred, bank people ask them to leave minimum amount in account. This results in effective payment of 500 or less. The amount of JSY which is meant for the expenses of hospital delivery and transport was used for buying household requirements, cosmetics and clothes for her or baby, to repay the borrowings. Many times they dint get to know that money had been deposited in her account. Money sanctioned was used for food (44%), travel (33%), drugs (58%) and others like depositing for children (19%).⁷

PHC Medical officers interview and other evaluation methods showed that the main reason for delay was irregular release of funds to the PHCs which happens once in 3 to 4 months and lack of technical knowledge of clerical staff in handling computer software.

According to FGDs conducted in the area, institutional deliveries have increased significantly and helped in reducing the infant and maternal mortality. ASHAs and

ANMs in Jharkhand felt improved MCH service and its utilization because of JSY during Concurrent evaluation in Jharkhand.

CONCLUSION

Obstetric care levels were above 95% among the mothers in all the PHCs. 79.5% of the eligible participants got the monetary benefit. CPSMS was the major method of disbursement (65%). Most of the mothers got money after three to four months delay. 63% of the study participants in the study area had got full range of antenatal intranatal and postnatal services recommended through JSY.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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