

A Study on Factors Affecting the Functioning of Janani Shishu Suraksha Karyakram in Ahmedabad District

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INTRODUCTION

A healthy mother is provider of good health of child and happiness in family. In India about 67,000 women die every year due to pregnancy related complications like hemorrhage, infection, high blood pressure, unsafe deliveries, etc. that may result in maternal and infant mortality. Similarly every year approximately 13 lakhs infants die within one year of birth. Out of this 9 lakhs newborns that die within four weeks of birth (2/3rd of the infant deaths), about 7 lakhs i.e. 75 % die within the first week (a majority of these in the first two days after birth)¹.

The figures state that in every five min one woman somewhere in India dies due to pregnancy-related

ABSTRACT

Background: Every five minutes one woman somewhere in India dies due to pregnancy-related complications, amounting to one lakh maternal deaths and 10 lakh new-born deaths each year. The Janani shishu suraksha karyakram(JSSK)programme was launched to aid in endeavor of decrease in MMR by giving various entitlements to pregnant mother and children.

Objective: To assess the factors affecting functioning of the Janani shishu suraksha karyakram program in community.

Methodology: The cross sectional study was carried in Ahmedabad District out during the period of January 2014 to December 2015. The 235 beneficiaries were interviewed from the government health centers.

Result: More than one third of beneficiaries were not aware about all the entitlements (benefits) of the programme.60% mothers had done USG in private set up. More than 70% mothers had to spend money for getting USG done followed by transport facility, medicine and laboratory investigations.

Conclusion: The factors affecting functioning of JSSK program were out of pocket expenditure incurred during pregnancy. The beneficiaries have to spend money because of laboratory investigations, transport facility, medicines and complication etc.

Key words: Janani shishusuraksha karyakram, Maternal mortality rate, Beneficiary, Entitlement.

complications amounting to one lakh maternal deaths and 10 lakh new-born deaths each year². An analysis of the causes of maternal deaths in India found that nearly half of maternal deaths occurred where institutional care had not been availed at the time of delivery³. The distance from home to health facility was less than 5 km in 49 per cent of institutional deliveries and as the distance increased number of women having institutional delivery decreased⁴. Among the reasons for not delivering in health facility, inadequate transport facilities (10.4%) and lack of adequate money (17.9%) featured as important reasons⁴. In summary, lack of physical as well as financial access for the natal care services is an important determinant for the use of institutional delivery in rural India⁵. Majority of maternal deaths can be prevented through basic and emergency obstetric care during delivery.

Promotion of institutional deliveries is an important strategy for achieving these objectives. The first 28 days of infancy period are therefore very important and critical to save children. Both maternal and infant deaths could be reduced by ensuring timely access to quality services, both essential and emergency in public health facilities without any burden of out-of-pocket expenses1. Important factors affecting access include High out of pocket expenses on transport required to take pregnant women from home to the facility, to higher facility in case she is referred further, and for going back from the health institution to her home, user charges for OPD, Admission, Diagnostic test, blood etc., Purchasing medicine and other consumables, Out of pocket expenses, Non availability of diet¹.

To overcome the above problem Government of India had launched Janani-Shishu Suraksha Karyakram (JSSK) on 1st June 2011 to ensure that each and every pregnant woman and sick neonates up to 30 days gets timely access to health care services including transport free of cost. The initiative entitles all pregnant women delivering in public health institutions to absolutely free and no expense delivery including caesarean section. It invokes a new approach to give emphasis on entitlements and elimination of out of pocket expenses for both pregnant woman and sick neonates¹.It stipulates out that all expenses related to delivery in a public institution would be borne entirely by government and no user charges would be levied.

Entitlements for pregnant women would include free drugs and consumables, free diagnostics, free blood wherever required, free diet during stay in the facility expected to be three days in case of normal delivery and seven in case of caesarian section¹. It also includes free transport from home to the facility, to higher facility in case of referral, and drop back home from health institution. All sick newborns accessing public health institutions for healthcare till 30 days after birth have similar entitlements. This initiative is aimed at mitigating the burden out of pocket expenses incurred by pregnant women and sick newborns¹. With the aim to understand the bottle necks and benefits, this study on factors affecting the functioning of Janani-Shishu Suraksha Karyakram was undertaken.

METHODOLOGY

The present study was conducted in the Ahmedabad district which is the central part of the state of Gujarat in western India⁶. According to the 2011 census, district has a population of 7,045,314 among them 19.82% people live in rural area⁶. Ahmedabad district has 8 Talukas (excluding corporation area) divided into Sanand, Bavala, Dholka Viramgam, Dhandhuka, Detroj, Mandal and Daskroi. There were 37 Primary Health Centers and 10 Community Health Centers in Ahmedabad district. The Study was conducted among beneficiaries of JSSK in Ahmedabad district.

A cross- sectional study was a carried out during period of January 2014 to December 2015. The information of deliveries under JSSK was obtained from Rural Health Department of district health office of Ahmedabad district. The proportion of deliveries conducted under Janani Shishu Suraksha Karyakram (JSSK) from government institutional was 65% in the year 2012-13 and 55% in 2013-14. Considering the average 60% deliveries under JSSK the sample size was calculated using following formula, Sample size = 4pq/L2 Considering Allowable Error was 10%. The calculated sample size was 256.

All beneficiaries of CHCs and selected PHCs were interviewed. There were 10 CHCs in Ahmedabad district. For the selection of the beneficiaries, the mothers who were delivered and were present at the time of visit were included and interviewed with pre designed and pretested questionnaire. The study was also undertaken in the primary health centers (PHCs) in every Talukas of Ahmedabad district. There were 37 PHCs in 8 talukas of Ahmedabad district. Out of 37 primary health centers in the district every alternate PHC was selected. Total 19 PHCs were selected for the study. From each PHC, 10 beneficiaries were selected by convenience sampling method from the delivery register of JSSK during April 2014 to march 2015. All the selected beneficiaries were interviewed by visiting their home. Study included 235 beneficiaries among them 190 beneficiaries from PHCs and 45 beneficiaries from CHCs.

The permission for data collection was taken from district health authority and consent of all beneficiaries taken before the interview for the study. Confidentiality and privacy were assured to all participants. The data collection of the beneficiaries was done by the predesigned and pre tested questionnaire. The questionnaire for the beneficiaries contain the social demographic information of mother, knowledge about the benefits of programme, the antenatal and intranatal history of mother, the details regarding delivery, the out of pocket expenses spend during antenatal period and delivery, transport facility, the information regarding delivered child and follow up, treatment facility for complications of mother and children also feedback regarding use of services. Data was scrutinized for completeness and consistency. Data was entered and analyzed using Microsoft excel & Epi-Info software.

RESULTS

The beneficiaries from total 19 primary health centers (PHCs) and 10 community health centers (CHCs) were selected to study the factors affecting the functioning of JSSK in Ahmedabad district. The 235 beneficiaries from the centers were interviewed for the assessment of factors affecting programme in the community. Total 235 mothers had availed JSSK services out of which 190 mothers were registered under the PHCs and interviewed in the community while 45 mothers were interviewed at the time of visit to CHCs during their stay to get the clearer picture of services under programme. More than 90% of the delivered mothers under JSSK were below the age of 35 years. 80% of the delivered mothers were educated up to primary and above. Majority (70%) of the beneficiaries belong to middle class family i.e. class III and IV (Table 1).

The beneficiaries were mainly aware about the free drugs, investigations and transport facility mainly drop back facility. More than one third beneficiaries were not aware about all the entitlements (benefits) of the programme (Table 2).

Table 1: Socio Demographic profile of deliveredmothers at health care centers (n=235)

Variable	Mothers (%)	95% C.I.
Age group (yrs.)		
16-25	144 (61.28)	54.94-67.62
26-35	77 (32.77)	26.64-38.90
36-45	12 (5.11)	2.24-7.89
45-50	2 (0.85)	-2.4
Religion		
Hindu	205 (87.23)	82.88-91.58
Muslim	30 (12.77)	8.42-17.12
Type of family		
Nuclear	123 (52.35)	45.84-58.86
Joint	112 (47.65)	41.14-54.16
Education		
illiterate	48 (20.43)	15.17-25.69
Primary	101 (42.98)	36.52-49.44
Secondary	77 (32.77)	26.65-38.89
Higher secondary	9 (3.83)	1.33-6.33
Occupation		
Housewife	138 (58.72)	52.30-65.14
Laborer	42 (17.87)	12.87-22.87
Worker	29 (12.34)	8.06-16.62
Others	26 (11.06)	6.97-15.15
Socioeconomic class		
Class I	0 (0)	
Class II	39 (16.59)	11.75-21.43
Class III	109 (46.38)	39.88-52.88
Class IV	61 (25.96)	20.24-31.68
Class V	26 (11.06)	6.98-15.14

All the mothers received antenatal care during pregnancy and 80% of them received care from government facility. More than 70% mother had four antenatal visits (Table 3).

There is a significant association between place of antenatal services and iron folic acid tablets consumption. Similar observation was made in TT injections also. Those who had received ANC from sub centers and PHCs among them 33% did not take iron folic acid tablet and 20% mothers did not take TT injections.

Table 2: Awareness regarding entitlements for Pregnant Mothers under JSSK beneficiaries (n=235)

	Mothers (%)	95% C.I.
Entitlements*		
Free drugs	156 (66.38)	60.20-72.52
Free blood transfusion	20 (8.51)	4.87-12.15
Free transport	99 (42.13)	35.69-48.57
Free investigations	175 (74.47)	68.79-80.15
Free food	102 (43.4)	36.94-49.86
Free postnatal care	34 (14.47)	9.88-19.06
Free referral	130 (55.32)	48.83-61.81
Source of information*		
Health worker	179 (76.17)	70.61-81.73
Relative	83 (35.32)	29.08-41.56
Media	35 (14.89)	10.25-19.53
Others	74 (31.49)	25.44-37.54
4 X X 1 1 1		

* Multiple answers

Table 3: Utilization of services among beneficia-						
ries (mothers)	during	antenatal	period	under		
JSSK (n=235)						

Variable	Mothers (%)	95% C.I.
Place for ANC		
Sub centers or PHCs	122 (51.91)	45.52-58.30
CHCs or Govt Hospital	70 (29.79)	23.94-35.64
Private hospital	43 (18.3)	13.36-23.24
ANC visits	. ,	
<4 visits	63 (26.81)	21.15-32.42
>=4 visits	45 (19.15)	14.12-24.18
Every month	127 (54.02)	47.65-60.39
Investigations	. ,	
Laboratory test	217 (92.34)	88.94-85.74
USG done	205 (87.23)	82.96-91.5
USG from private setup	140 (59.57)	53.3-65.84
USG from govt facility	65 (27.66)	21.94-33.38
USG not done	30 (12.77)	8.5-17.04
Iron folic acid tablets	183 (77.87)	72.56-83.18
TT injections	197 (83.83)	79.12-88.54
Complications during ANC		
Present	84 (35.74)	29.61-41.8
Absent	151 (64.26)	58.13-70.3
Referral to higher center (n=	=84)	
Yes	71 (84.52)	76.78-92.2
No	13 (15.48)	7.74-23.22
Hospital admission (n=71)	. ,	
Yes	55 (77.46)	67.74-87.18
No	16 (22.54)	12.82-32.20

Services	Iron folic acid tablets		Chi square value	P value	
	Yes	No	Total		
Place of ANC					
Health centers	85	37	112	10.01	0.006*
Sub centers or PHCs	60	10	70		
CHCs or Government Hospital	38	05	43		
Private hospital	183	52	235		
TT injections					
Health centers	97	25	122	6.4	0.03*
Sub centers or PHCs	58	12	70		
CHCs or Government Hospital	42	01	43		
Private hospital	197	38	235		
Referral to higher centers					
Health centers	44	78	122	4.41	0.11**
Sub centers or PHCs	18	52	70		
CHCs or Government Hospital	09	34	43		
Private hospital	71	164	235		

Table 4: Association between health care facilities and availed services among beneficiaries during an-
tenatal period under JSSK (n=235)

*significant **Not significant

Table 5: Utilization of services among beneficiaries (mothers) during intranatal period under JSSK (n=235)

	Mothers (%)	95% C.I.
Place for delivery		
Sub center	25 (10.64)	6.7-14.58
PHC	148 (62.98)	56.81-69.15
CHC	57 (24.26)	18.78-29.74
Government Hospital	3 (1.28)	0.16-2.72
Private hospital	2 (0.85)	-2.34
Type of delivery		
Normal	135 (57.45)	51.13-63.77
Normal with episiotomy	84 (35.74)	29.61-41.87
Caesarean section	16 (6.81)	3.59-10.03
Duration of hospital stay		
<24 hrs.	71 (30.21)	24.34-36.08
2 days	95 (40.43)	34.16-46.7
3 days	45 (19.15)	14.12-24.18
3-5 days	21 (8.94)	5.29-12.59
5-7 days	3 (1.28)	0.16-2.72
Free food during stay		
Yes	215 (91.49)	87.92-95.06
No	20 (8.51)	4.94-12.08
Complications during deliv	very	
Yes	38 (16.17)	11.46-20.88
No	197 (83.83)	79.12-88.54
Referral history(n=38)		
Yes	31 (81.57)	69.24-93.9
No	7 (18.42)	6.09-30.75

Referral to higher centers was observed in all health centers and difference is not significant (Table 4). Out of 43 mothers who had received antenatal care from private hospital only two mothers were delivered at private hospital. Almost 70% mothers had 48 hours stay after delivery in health centers (Table 5). Out of 190 mothers 88% were provided drop back facility after discharge from health centers but only 65% mothers had availed the transport facility provided by health centers. Among 36 delivered mothers who developed complications during postnatal period more than 50% of the mothers visited private hospital for the treatment (Table 6).

Regarding the reasons for expenditure incurred by the family to avail services during antenatal period it was observed that more than 70% mothers had to spend money for getting USG done followed by transport facility (42%), medicine (37%) and laboratory investigation (35%). The 20% beneficiaries also had spent money on antenatal visit and for admission to Private hospital for complications during antenatal Period. Mean expenditure for antenatal care was Rs. 2567±986 among beneficiaries. The reason for expenditure incurred by the family of delivered mothers to avail services during intranatal period is observed that more than 40% mothers had to spend money for medicine followed by transport facility (30%). More than 35% mothers had to incur out of pocket expenditure for follow up visit to the hospital during postnatal period. Mean expenditure for natal and postnatal care was Rs. 1542±715 among beneficiaries.

All the infants delivered in community health centers were less than 7 days old at the time of visit. Out of 235 delivered infants 75% infants had birth weight more than 2.5 kg. There were 121 were male children and 114 were female children out of 235 live delivered infants. The male: female ratio was 1.06:1. The 80% of infants who availed services were exclusive breast fed, received free medicines as per requirement and immunized as per schedule in government health facilities (Table 7).

Drop back facility was used by 65% of the infants along with delivered mothers. 55% infants had history of illness after birth and among them 62% had mild illness like fever, cough, cold, diarrhea and abdominal pain. Regarding the reasons for ex-

Table 6: Utilization of services among beneficiaries (mothers) during postnatal period under JSSK in PHCs (n=190)

Variable	Mothers (%)	95% C.I.			
Drop back facilities after delivery					
Provided	168 (88.42)	83.87-92.97			
Not provided	22 (11.58)	7.03-16.13			
Utilized	124 (65.26)	58.49-72.03			
Not utilized	66 (34.74)	27.97-41.51			
Complications during postnatal period (42 days)					
Present	36 (18.95)	13.38-24.52			
Absent	154 (81.05)	75.48-86.62			
Treatment received for complication (n=36)					
PHC	3 (8.34)	0.69-17.37			
CHC	6 (16.67)	4.5-28.84			
Government hospital	8 (22.23)	8.65-35.81			
Private hospital	19 (52.78)	36.74-69.09			

Table 7: Details of services to infants under JSSK (n=235)

Health services	Infants (%)	95% C.I.
Child with exclusive breast feed	179 (76.17)	70.72-81.62
Child received free medicines	210 (89.36)	85.42-93.3
Child received immunization	192 (81.7)	76.76-86.64
Any complications after delivery	19 (8.09)	4.6-11.58
Child received referral	13 (5.53)	2.61-8.45
Child received blood transfusion	1 (0.42)	-1.66

penditure incurred after deliveries of infants care 34% family spent for laboratory investigations and 45% of them also spent money on transport and for the illnesses after birth. Mean expenditure during infant care was 2567±932. More than 30% mothers spent for treatment for mild illness after birth but only 10% mothers have to spent money for medicines of their children.Majority of the beneficiaries were not aware about grievance redressal system and did not utilize the facility.

DISCUSSION

Maternal and child morbidity and mortality is a huge problem in India. Increase in number of births attended by a skilled attendant and the delivery of emergency obstetric care remain the most effective measures to reduce maternal mortality. To enhance the efforts for reduction of maternal and child mortality and remove the hurdles JSSK was launched centrally on first June 2011 in India¹. The JSSK provide cashless services during pregnancy and in postpartum mothers up to 42 days to each and every pregnant mother regardless of age, caste, social status and economic condition of the family. The benefit was also extended to give all free services to infants up to 30 days which further extended up to one year in Gujarat¹. The interview of 235 beneficiaries was taken for assessment of quality of services and factors hindrance for program in community. In our study majority of the beneficiaries who availed JSSK services were less than 35 years of age and belong to SE class III & IV⁷. Almost 80% of the beneficiaries were literate and education level has good impact over awareness about facility⁸. JSSK was aimed at mitigating the burden of out of pocket expenses incurred by pregnant women and sick infants. In present study it was observed that all the pregnant mothers had received health care services during pregnancy regardless of their economic condition and social status of the family.

Good transport facilities play a major role in improving institutional delivery. The beneficiaries had difficulty to avail transport services in emergency and also had to spend money for transportation because of the distance to health facility⁵. As per DLHS III Gujarat report9 the mean cost of transportation for institutional delivery was < 274. As per the guidelines pregnant women are entitled to free ambulance services from home to facility and back. In the present study only 50% of the beneficiaries availed the transport service from home to facility. The varous reasos were lack of awareness, non-availability of an ambulance at the time of labor or that the family arranged a vehicle on its own. In contrast majority of them were provided transport facility for referral and drop back. The utilization of drop back transport facility was found to be more because information was given at the time of delivery or immediately after delivery. Similar findings were observed in study by Rifat jan et al¹⁰ that 51.7% of recently delivered women were provided free ambulance services from home to the facility & 68% were provided free service from facility to the home and money by cheque was also provided to 2.8% of the women only who had hired a vehicle.

One of the big hurdles for utilization of health care services by mothers and child was financial constrain. According to Tanvi N study11 in Public healthcare institutions, the expenditure per delivery totals ₹ 1,801. Under JSSK this issue was resolved by giving all the services for pregnant mother as well for infant free of charge. All services provided should be cashless so any pregnant women or infant could get benefit from government health facility. This includes services like medicines, laboratory services, health checkups, hospital admission, blood transfusion, transport facility etc. and if the beneficiaries had to incur expenditure for any services it will get reimbursed on submitting an authorized bill or voucher. In either way the beneficiaries must enjoy cashless services. This benefit led to increase in deliveries and decrease in out of pocket expenditure. A study by Neetu Tripathi et al¹² showed that out-of-pocket expenditure for delivery decreased from Rs. 5342 to Rs. 3565 between pre and post JSSK intervention

period. It was observed that mean expenditure for antenatal care was 2567 Rs and 1542 Rs for natal & post natal care. These findings were similar to the study by Mahaila Swasthya Adhidkar Manch in UP reported that on an average expenditure per mother for delivery in Public Hospital was ₹ 1277¹³.

Current study observed that beneficiaries had to spend during antenatal, intranatal and postnatal period and there was also an expenditure incurred for infants care. For antenatal care more than 70% of the mothers had to spend for USG followed by transport facility. There was also expenditure incurred for medicines and laboratory investigations. Out of pocket expenditure incurred during postnatal care because more than half of beneficiaries who had complications visited private facility for the management. This may be due to beneficiaries were unaware about the postnatal entitlements under JSSK. Despite a cashless services, our study points to persistence of out-of-pocket expenditure on account of medicines, investigations and for the management of the complications. Another important reason for out of pocket expenditure was lack of awareness about reimbursement of the expenditure incurred on submission of authorized bill.Beneficiaries at PHCs have to spent more than at CHCs. The reason could be due to availability of better facilities and specialist services at CHCs. Those who had out of pocket expenditure did not satisfy with the service. Another reason was that beneficiaries had to avail services from private set up either due to lack of awareness or individual choice due to previous experiences with the government facility.

The major determinant of the outcome of the pregnancy in terms of survival of the mother and child are antenatal care, type of delivery and timely transport to the health facility. That depends upon the efforts of health workers and also acceptance level of beneficiaries. ANC must be started early and taken regularly by all pregnant mothers. In spite of receiving antenatal care 22% of mothers had not taken iron folic acid tablets and 16% of mothers had not received TT injections. This was observed mainly among beneficiaries who availed services from SC and PHCs. The beneficiaries who had complications were treated and whenever required referred to higher center and if needed hospitalized for further management during antenatal and intranatal period.

For the successful utilization of any scheme it is very necessary to create awareness among beneficiaries regarding the entitlements under the programme. More than one third of the beneficiaries were not aware about all the entitlements (benefits) of the programme which had resulted into out of pocket expenditure. 7th CRM reported that the awareness in community about all entitlements of JSSK scheme was low¹⁴. It also observed that very less beneficiaries were aware about the extended component of the programme for infant care and hence there was expenditure observed in services for the delivered children. This had led to underutilization of services provided for infants by government health care facilities. According to NHSRC report on JSSK¹⁵ it was observed that 74% sick infants availed free drugs, 40% free diagnostics, 10% sick infants free home to facility transport and 28% free drop back home. Health worker like ASHA or ANM was the important source of information for creating awareness. Media had also played a part as a source of information in 15% of beneficiaries. The IEC material enlisting all the entitlements should be displayed in every health centers to increase knowledge regarding the programme.

CONCLUSION

The beneficiaries had utilized services provided under JSSK pertain to their awareness still the beneficiaries had to spend money during antenatal, intranatal, postnatal services as well for infant care and it serves as the big hurdle for success of program. Even though JSSK is providing all health services cashless for the beneficiaries there was out of pocket expenditure from family as they were not aware about reimbursement process. The Families need to be aware about all the entitlements provided by government facilities for mother and children and enhance their proper utilization for reduction in out of pocket expenditure.

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