Improving Access to Institutional Delivery through Janani Shishu Suraksha Karyakram: Evidence from Rural Haryana, North India

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ABSTRACT

Background: In India, Janani Shishu Suraksha Karyakaram (JSSK) was launched in the year 2011 to assure cashless institutional delivery to pregnant women, including free transport and diet. Objective: To assess the impact of JSSK on institutional delivery. Materials and Methods: A record review was done at the primary health care facility in Faridabad district of Haryana from August 2010 to March 2013. Focus group discussion/ informal interviews were carried out to get an insight about various factors determining use/ non-use of health facilities for delivery. Results: Institutional delivery increased by almost 2.7 times (197 Vs 537) after launch of JSSK (p < 0.001). For institutional deliveries, the most important facilitator as well as barrier was identified as ambulance service under JSSK and pressure by elders in the family respectively. Conclusions: JSSK scheme had a positive impact on institutional deliveries. It should be supported with targeted intervention designed to facilitate appropriate decision-making at family level in order to address barriers to institutional delivery.

Key words: Institutional delivery, JSSK, primary care, rural India,

Introduction

Promotion of Institutional delivery is one of the most important interventions in India with a high maternal and neonatal mortality rate.[1,2] A Nation-wide survey reports 73% institutional deliveries in the year 2009.[3] Important reasons for home deliveries documented were lack of felt need for delivery at health facility, and high cost of the hospital services in India.[4] Factors affecting care seeking include economic status, parental education, high out of pocket (OOP) expenditure in hospitalization, and lack of or unaffordable transport facilities.[5-7]

Conditional cash transfer scheme, named Janani Suraksha Yojana (JSY) was introduced in India in the year 2005, with a strategy is to link cash assistance to institutional delivery.[5] Due to JSY, institutional deliveries across the country have increased but with a few limitations such as high OOP expenditure especially for purchase of the drugs, and transport, incurred by families.[6]

In the view of these limitations, Government of India introduced Janani Shishu Suraksha Karyakram (JSSK) scheme in June 2011. Under this scheme; delivery, caesarian section, drugs and consumables, diagnostics, diet during stay (up to 3 days for normal delivery and 7 days for caesarian section), provision of blood, and transport between home to health institution is provided free of cost. The cash less service benefits are
also extended to the newborn till 30 days after birth.[7]
In the state of Haryana, JSSK scheme was launched in September 2011.[8] This study deals with impact assessment of JSSK on utilization of delivery services at a Primary Health Centre, in Faridabad district of Haryana.

**Materials and Methods**

This was a facility and community based cross-sectional study, consisting of both quantitative and qualitative components, carried out at the Primary Health Centre, Chhainsa. The study area was a part of Comprehensive Rural Health Services project, Ballabgarh, of All India Institute of Medical Sciences; New Delhi.[9] Study facility provides round the clock delivery services to catchment area consisting of approximately 47,000 rural inhabitants (year 2012). In the study area, JSSK scheme was launched in December 2011. Comparison was made for a period of 16 months before (August 2010-November 2011) and after the implementation of JSSK in the study area (December 2011-March 2013). We extracted data of all deliveries conducted in 32 months from the hospital records in the format of Microsoft excel. Information about various socio-demographic factors and distance between woman’s village and study facility was also retrieved from these records. The proportions and means were compared through chi-square and t-test respectively using STATA 12.1.

Focus group discussions (FGD) and informal discussions were carried out to get insight about factors determining utilization of JSSK services and place of delivery. Two FGDs each were carried out among women who had delivered at the hospital, and at home during the period of January 2013-March 2013. FGDs were conducted in two villages, one within five kilometer range- Chhainsa and another which was more than five kilometers away from the study facility- Atali. FGD guide was prepared consisting of domains such as reason for choice of place of delivery, community perception about various services under JSSK scheme; suggestions for improvement of delivery services. Qualitative data was analyzed manually by free listing of responses, domain identification followed by coding of responses. Qualitative data was triangulated with quantitative data to make an assessment of reality by synthesizing multiple sources of information.

**Results**

During the study period (August 2010-March 2013), a total of 734 deliveries took place at the study facility. Out

| Variable                                | Subgroup | Pre-JSSK (August 2010 – November 2011) | Post-JSSK (December 2011–March 2013) |
|-----------------------------------------|----------|--------------------------------------|-------------------------------------|
| Number of deliveries at study facility *| 197      | 537                                  |
| Distance of residential village from study facility* | <5kms 148 (75.0%) | 273 (50.8%) |
| Age of pregnant women (years)          | Mean (SD) | 23.7(3.2)                           | 23.5(3.4)                           |
| Caste of pregnant women                | Upper    | 72 (36.5%)                          | 230 (42.8%)                         |
|                                         | Lower    | 106 (64.5%)                         | 277 (57.2%)                         |
| Education status of husband of pregnant women | Illiterate | 25 (12.7%)                         | 99 (18.4%)                          |
|                                         | Up to Secondary | 70 (35.5%)                         | 174 (32.4%)                         |
|                                         | Higher secondary | 50 (25.4%)                          | 123 (22.9%)                         |
|                                         | Graduate and above | 52 (26.4%)                          | 141 (26.2%)                         |
| Education status of pregnant women     | Illiterate | 67 (34.0%)                          | 182 (33.8%)                         |
|                                         | Up to Secondary | 94 (47.7%)                          | 242 (45.0%)                         |
|                                         | Higher secondary | 27 (13.7)                           | 65 (12.1%)                          |
|                                         | Graduate and above | 9 (4.6%)                           | 48 (8.9%)                           |
| Birth order                             | Mean (SD) | 2.6 (1.6)                           | 2.4 (1.5)                           |

*Statistically significant results with P value < 0.05

**Table 2: Factors determining institutional delivery under JSSK**

| Themes                     | Categories       | Determining factors                                                                 |
|----------------------------|------------------|-------------------------------------------------------------------------------------|
| Personnel/societal factors | Family constraint| Non-availability of family members to accompany                                      |
|                            |                  | Pressure from elderly in family                                                     |
|                            | Perception       | Previous uneventful delivery experience at home                                     |
|                            |                  | Ensuring cleanliness at the home                                                   |
| Health system factors      | Access to health facility                                   | Availability of ambulance service                                                  |
|                            |                  | Felt need for ambulance service was more for                                       |
|                            |                  | women residing away from the health facility                                       |
|                            |                  | Punctuality and cordial behaviour of ambulance staff increases services utilization |
|                            | Quality of services | Ensures timely referral in emergency situation                                     |
|                            |                  | Behaviour of health care provider                                                |
of these, 197 (26.8%) took place before and 537 (73.2%) after implementation of JSSK (1st December 2011). This
to a 2.7 times increase in the number of deliveries across the study period and was statistically significant
(p < 0.001). Differences in socio-demographic characteristics among those who delivered before and after the launch
of the scheme were statistically non-significant, except for place of residence of women (> 5 kilometers from study
facility) (p value < 0.001, df = 1) [Table 1].

**Qualitative study results**

FGD conducted among women who had a hospital delivery revealed that difficulty in maintaining
cleanliness at home during childbirth was identified as a reason for hospital delivery, and not availability of
ambulance service.

“To maintain purity and hygiene at home we prefer deliveries in hospital” (A 20 years old respondent)

Respondents came to know about free diet services only during their hospital stay. However due to the cultural
norm, a few women did not take solid foods for up to 6-11 days post-delivery.

FGD and Informal discussions among women who had hospital delivery in a village > 5 kilometers away
from study facility revealed accessibility and round the clock availability of ambulance was the most important
facilitator for institutional delivery. Cordial behavior of ambulance staff, punctuality of ambulance services and
availability of cashless services under JSSK scheme were identified as facilitator factors too. Ambulance service
also ensured timely referral in emergency situations.

“At the time of deliveries, we tell ASHA (village level volunteer) and they call ambulance any time we can
go” (A 28 year old respondent)

Harsh behavior by health care providers during earlier childbirth in hospitals, or non-availability of a family
member who could accompany the pregnant women to health facility, traditional practices, assurance from
local birth attendant (dai) for normal delivery at home, family member’s preference for home delivery, and
previous experience of uneventful home delivery were the common reasons for home delivery reported by
respondents. Themes, categories and subcategories derived from qualitative study about factors determining
utilization services under JSSK are described in Table 2.

**Discussion**

We used both quantitative and qualitative data to document the impact of services under JSSK on
institutional delivery at the primary care level. More than double the increase in number of deliveries at primary
care level after implementation of JSSK scheme was observed in spite of no significant development either in
human resources or in infrastructure up-gradation at the study facility. Hence, the observed increase in
institutional deliveries could be attributed to additional services provided under JSSK. Increase in institutional
deliveries was contributed proportionately more by women coming from villages away from the study
facility. Amudhan *et al* documented that service related interventions were more effective in the population
primed by demand side intervention. JSY scheme helped to generate demand in the community for
institutional delivery since its launch in the year 2006. Under JSSK, services were provided that contributed to
further increase in institutional delivery in population already primed by JSY scheme in the study area.

Qualitative data suggested that the utilization of cash less ambulance service was dependent on felt need of
the community. Several studies have documented that lack of transport facilities is a barrier to institutional
delivery as well as a reason for maternal and neonatal mortality.

Studies evaluating the demand side intervention of “JSY” revealed that it offered only partial financial risk
protection and induced new OOP expenditure due to hospital delivery. Present study demonstrated the increase in utilization of cash less delivery services under JSSK which might have led to a decrease in OOP expenditure.

Previous studies documented family traditions, financial constraints, elder’s decisions, cost of hospital
services, lack of transport facilities, rude behaviour of the healthcare personnel as barriers to availing healthcare
facilities similar to the findings of present study. Incorporation of work ethics and stress management
in situations of overburden at the work place should be incorporated in the training module of health care
providers.

Impact of increased population awareness, improved literacy and socio-economic status on institutional
delivery cannot be ruled out. However, factors like age, education, birth order were comparable across
both groups in this study. Hence, it seems unlikely that all these factors were responsible for impact of JSSK.
The study facility, which was a PHC, functioned as a 24 x 7 delivery facility with adequate health staff.
Assured availability of trained health care providers might have influenced patients to opt for institutional
delivery. Training of manpower such as staff nurses and medical officers at the study facility was done as a part
of routine human resource development strategy under National Rural Health Mission (NRHM). Results of this
study could be generalized to those primary care facilities that have adequate health infrastructure and manpower.
Impact of other ongoing schemes under NRHM such as
JSY, introduction of ASHA could also have contributed to increase in institutional deliveries. It needs to be studied further in order to quantify the impact of JSY and JSSK separately with robust study design.

We observed that services through JSSK in adequate health infrastructure situation could bring pregnant women to the public health facility for child-birth. Out of all services, Ambulance service was identified as most important facilitator for reducing access barriers. Increase in institutional deliveries at primary care level through JSSK will not only decrease the OOP of the population, but also help build faith in the government health facilities. Nonetheless, there is need to increase awareness in all sections of the community through strong media campaigns covering all aspects of JSSK to get maximum output of the scheme.

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Conflicts of interest
There are no conflicts of interest.

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