Evaluation of Janani Shishu Suraksha Karyakram scheme and out of pocket expenditure in a rural area of Northern India

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Abstract

Introduction: The stagnant performance of countries with regard to maternal and child health is linked to low investment in health and out of pocket expenditure (OOP). To address issue of OOP expenses related to maternal and newborn care, Janani Shishu Suraksha Karyakram (JSSK) was launched in the year 2011 in Mewat district of Haryana with the objective to eliminate OOP expenses of obstetric women and sick infants. Methods: A community based cross-sectional study was undertaken in rural area of Haryana to know the utilization of JSSK scheme and OOP expenditure. A total of 200 delivered mothers were included as study subjects. The study was conducted from July 2013 to September 2014. Results: Out of 200, 134 subjects delivered in government institutions and hence were eligible for benefits of JSSK scheme. Twenty nine percent of deliveries occurred in private facilities and 17% newborns were sick within 30 days of birth. OOP expenditure was done by 83.5% subjects with median amount Rs. 1100. Most common suggestions given by subjects were the availability of ultrasound facility, cooperative staff and crowd management in hospitals. Conclusion: For reducing OOP expenses, up-gradation and constant supervision is required to maintain the adequacy of services. More evaluation studies need to be conducted to know the utilization pattern of JSSK so as to improve the coverage and removing the bottlenecks to further increase the utilization of JSSK scheme.

Keywords: Diagnostics, diet, out-of-pocket expenditure, referral transport

Introduction

Improving the maternal and child health and their survival are central to the achievement of national health goals under the National Rural Health Mission as well as the Millennium Development Goals 4 and 5. Globally, an estimated 287,000 maternal deaths occurred in 2010, when the global maternal mortality ratio was 210 maternal deaths per 100,000 live births. Sub-Saharan Africa (56%) and Southern Asia (29%) accounted for 85% of the global burden of maternal deaths in 2010.[1]

At the country level, India accounted for 19% of all global maternal deaths. The mortality rate in children below 5 years was 59/1000 live births (Sample Registration System 2010) of which 56% and 79% children die in the 1st month and 1st year of life, respectively.[1]

Preterm birth has emerged as the leading cause of neonatal death, underlying the need for rapid scale-up of maternal health interventions to improve neonatal health outcomes. A large number of maternal and child deaths are attributable to the three “delays:”

- The delay in deciding to seek care
- The delay in reaching the appropriate health facility, and
- The delay in receiving quality care once inside the institution.

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The relatively stagnant performance with reference to maternal and child health indicators is linked with low levels of government investment in health. According to the World Bank Report (2010–14), overall health spending in India is low in comparison with regional countries: 4% of the gross domestic product which is the sum of public and private health expenditure. Unlike developed countries, health expenditure in India is largely met by the households (71%), followed by government (20%), businesses (6%), and external flows (2%). Often household health expenditure termed as out-of-pocket (OOP) expenditure, is catastrophic for poor households and increases the level of poverty. To address this issue of OOP expenses related to maternal and newborn care, Janani Shishu Suraksha Karyakram (JSSK) was launched in the year 2011 in Mewat district of Haryana with the objective to eliminate OOP expenses of obstetric women and sick infants. The entitlements for obstetric women and infants are free and cashless delivery (including cesarean), free drugs, free diagnostics, free provision of blood, free diet, and free transport to and fro to a health facility. The present study was done to know the utilization of services under JSSK scheme by obstetric women and sick newborns up to the age of 30 days.

Materials and Methods

Study area

The study was conducted in a Primary Health Centre (PHC), Lakhman Majra which is one of the rural PHC attached to the rural health training centers of Pt. B. D. Sharma PGIMS Rohtak, served by four subcenters, five villages, and 27 Anganwadis.

Sample size

All women residing in the study area who were registered at the subcenters and whose delivery took place from July 2013 to September 2014 were included in this study. A total of 200 study subjects were included for the study. From each subcenter, fifty subjects were chosen randomly, thus making a sample of 200 study subjects from four subcenters.

Study subjects

All women residing in the study area, registered at the subcenters and who delivered during July 2013 to September 2014 were included in the study after their respective consent.

Exclusion criteria

Women or concerned family members, who were not willing to give informed consent or who could not be contacted even after two home visits.

Study design

Community-based descriptive type study with cross-sectional design.

Study protocol

A list of subcenters in the study area was obtained from the PHC, and a subcenter wise list of all registered obstetric women who had delivered was prepared from the registers maintained at the subcenters. The list of delivered females was updated every month. The investigator visited the study subjects at their residence for interviewing the study subjects.

A pretested semi-structured interview schedule was used for interviewing. The information included socioeconomic profile, awareness, and utilization of services under JSSK. Information regarding the study subjects who were registered but died during or after delivery was obtained from the concerned family members. Informed consent was taken before interview schedule, and confidentiality of the information was assured.

Data analysis

Data collected was analyzed using SPSS version 20.0 SPSS version for Windows (Armonk, NY:IBM Corp). Categorical data were presented as percentage (%). Normally distributed data were presented as means and standard deviation.

Results

Out of 200 study subjects interviewed, backward class and scheduled class categories constituted 17.5% and 34%, respectively; 35.5% and 18% were educated up to high school and graduation. Family size of the subjects was ≤5 in 27.5%, and rest had a family size of more than 5. Monthly family income, i.e., up to Rs. 5000, >Rs. 5000–10,000, and >Rs. 10000 was in 43.5%, 33.5%, and 23%, respectively.

Place of present delivery was 4% (home delivery), 42% (government PHC/Community Health Centre (CHC)/Government Hospital (GH)), 25% (Tertiary Care Center), and 29% in private institutions. Thus, a total of 134 deliveries underwent in government facilities that were entitled for

![Figure 1: Diagrammatic representation (component bar chart) of benefits received of Janani Shishu Suraksha Karyakram scheme by subjects](image-url)
provisions of JSSK scheme. Figure 1 shows the utilization of different services such as free diet, drugs, diagnostics, and transport by the entitled beneficiaries.

Of the 200 women who delivered, 34 (17%) newborns were sick in first 30 days who were entitled for free transport services. Fifteen (44.12%) out of 34 newborns could not avail transport services. Reasons for not availing free transport were being taken to a private facility, 7 used own vehicle and paid taxi and nearby health facility.

OOP expenditure was done by 83.5% of the study subjects. The mean expenditure was Rs. 4289 (range 150–51,200). The median OOP expenditure was Rs. 1100. Furthermore, overall 176 subjects had OOP expenditure which had to spend on healthcare irrespective of delivery, private, or home [Figure 2].

Study subjects also gave suggestions regarding difficulties faced by them to improvise the present scheme. Various suggestions were regarding need of ultrasound (USG) facility, cooperative staff, overcrowding management, improved diet quality, and timely response of ambulance services [Figure 3].

**Discussion**

JSSK was launched to ensure that each and every pregnant women and sick neonates up to 30 days get timely access to health-care services including transport free of cost. The present study was done to evaluate the JSSK scheme utilization.

The majority of the deliveries were institutional which was higher in government institutions (67%) and on lower side in private institutions (29%). Home delivery happened in 4% of subjects. In District Level Household Survey (DLHS-4), 82.5% of deliveries occurred in institutions, out of which 54.5% and 28% of deliveries occurred in government and private institutions. Mondal et al. reported 2.4% home deliveries and 97.6% institutional deliveries in rural area of West Bengal. Home deliveries were less probably because of proper counseling, nearby location of the delivery point and high literacy of study subjects.

Referral transport was used by 92.5% of pregnant women and 55.88% of newborns from home to institute, referral to higher centers and institute to drop back home. Goyal et al. in Wardha district, Maharashtra revealed that 28% of pregnant women and none of the sick newborn availed free transport services from home to health institutions; 19.24% pregnant females and 50% sick newborns availed free referral transport services from transfer to higher level facility for complications, 65.83%, and no sick newborns availed free back home drop transport facility in the study area.

Results of our study had a higher proportion of pregnant women utilizing referral transport because of prior information provided by local Anganwadi or Accredited Social Health Activist worker, but it was comparatively on lower side in case of newborns as mothers had found it hard to wait for the referral transport to come and pick the newborn and the mother.

This study found a higher proportion of subjects were provided free diet, and it was well received by patients as well. Hot cooked meals were provided to all patients in GH and tertiary care centers whereas in periphery (PHC/CHC) every mother was given two dry packs of biscuits and a milk packet. Tyagi et al. reported utilization of free diagnostics and free food as 96% and 64% respectively. IIHMR (2012) conducted a study in Rajasthan reported that 60% of mothers received free diet whereas free diagnostic services were availed by 75% of subjects. Bhushan, Director (Maternal health) in Secretary review meeting reported that free diet and free diagnostics provided to beneficiaries was <40% each in Haryana in quarterly report 2012. JSSK report for Maharashtra state revealed that 91% and 97% free diet utilization by beneficiaries in PHC and District Hospitals, respectively.

National Health System Resource Centre reported 82.3% free laboratory test usage by pregnant women in Barwala block, Haryana and 71.4% of pregnant females reported that free laboratory investigations were done at government facilities in Delhi published in quarterly report 2013. Free diagnostic facilities included urine pregnancy test, hemoglobin estimation, urine test for protein and sugar and test for HIV. Moreover, radiological investigation (USG) was a common deficiency in periphery and most had to shell out money to get the radiological imaging done.

The present study found that entitlement of free medicines was well received by the majority of study participants. A study conducted in Rajasthan reported that 75% of subjects received free drugs. A study in Barwala block in Haryana revealed
that 100% of subjects received free medicines.\textsuperscript{[13]} Tyagi \textit{et al.} in Himachal Pradesh reported 86% of mothers received free drugs.\textsuperscript{[9]} The results of our study corroborate with that of other studies reported for the same region. Medicine supply in this part of the region is quite good and very few had to purchase medicines from outside.

Overall median OOP expenditure was lower than the OOP expenditure reported for Rohtak District during 2012–13 in DLHS-4 survey which revealed that OOP expenditure per institutional delivery in public health facility was Rs. 1500 and 1800 for rural and total, respectively.\textsuperscript{[9]} Tripathi \textit{et al.} conducted a study in an urban slum of Chandigarh and reported mean OOP expenditure for antenatal care and delivery at Rs. 7902.\textsuperscript{[13]} Mondal \textit{et al.} reported direct costs of institutional delivery was Rs. 205, 900, and 6600 for block PHC, medical college, and private facility, respectively.\textsuperscript{[8]} Pregnant women have been exempted from user charges but incur expenditure on diagnostics, especially radiological and blood investigations.

The majority of subjects suggested that ultrasonography facility should be made available at health facilities. However, it may be added here that lack of a sufficient number of radiologists to provide USG facility produces hindrance to adequate services at government facilities. Non-cooperation and lack of sensitiveness on the part of health staff were the turnoff factors for the beneficiaries. Furthermore, overcrowding at government facilities also prompted patients to go to private facilities.

The present study was the only evaluation study done in the area. This study was cross-sectional in nature, and there was a lack of baseline data regarding OOP expenditure in Rohtak district before JSSK program. Therefore, changes regarding OOP expenditure cannot be commented on. In addition, as the study was conducted at the vicinity of a medical college, there was the obvious inclination of toward medical college as a place of delivery. However, since the current study was limited to rural area, the urban area would have shown a better utilization pattern of services.

The present study explores the services being provided by JSSK scheme at the grassroots level and to know whether the government schemes are adequate in rural population where more than two-third of India lives. More evaluation studies need to be undertaken for measuring OOP expenditure which sometimes becomes catastrophic expenditure in the absence of public services and facilities.

**Conclusion**

JSSK scheme has been underutilized in rural areas of Haryana as lack of facilities such as USG which favor OOP expenditure. OOP expenditure has been incurred by most of the subjects as facilities are lacking in peripheral areas. Referral transport has been well received by the mothers but not by newborns. Free diet and drugs were provided to the beneficiaries. For reducing OOP expenses, up-gradation, and constant supervision is required to maintain the adequacy of services. More evaluation studies need to be conducted to know the utilization pattern of JSSK so as to improve the coverage and removing the bottlenecks to further increase the utilization of JSSK scheme. Figure 4 depicts the outcome of JSSK scheme from the present study.

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**Conflicts of interest**

There are no conflicts of interest.

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![Figure 4: Diagrammatic representation of Janani Shishu Suraksha Karyakram outcome](image-url)
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