Maternal and Child Healthcare: An Analysis of Out-of-pocket Expenditure under the Janani Shishu Suraksha Karyakaram

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ACKNOWLEDGEMENTS

This is the revised version of the paper presented at the seminar at the Institute of Economic Growth, Delhi on 24 February 2015. We would like to thank the Ministry of Health and Family Welfare (MoHFW) for providing financial assistance. We would like to extend our gratitude to the participants for their valuable comments.

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ABSTRACT

This paper primarily focuses on the repercussions of the Janani Shishu Suraksha Karyakaram (JSSK) on the out-of-pocket expenditure incurred by beneficiaries. The paper examines the pattern of spending by beneficiaries on the various components of the JSSK at an aggregated and disaggregated level. This has been done by analysing the expenditures incurred on diet, diagnosis, transportation, and medicines separately and collectively on maternal and child health. According to the primary survey conducted across various districts of Delhi, beneficiaries are still incurring huge costs on health. The larger share of the expenditure is on diagnosis, which is mainly due to infrastructure bottlenecks followed by expenditure on medicines, which is due to lack of timely availability of drugs. While the scheme guarantees free transportation services to the beneficiaries, due to lack of ambulances and narrow inaccessible lands, beneficiaries are incurring costs on transportation, too. Diet constitutes an important part of the healthcare scheme; however, provision of raw food items like eggs, breads, etc. defeats this component of the scheme, i.e. to provide adequate nutrients to the beneficiary. This paper examines the various infrastructure and other bottlenecks that are defeating the ultimate aim of the JSSK, thereby also finding ways to reduce the out-of-pocket expenditure of beneficiaries.

Keywords: Diagnosis costs; transportation costs; drugs and diet

1 INTRODUCTION

Health has always been an important concern for policymakers and researchers in India. While the maternal mortality rate (MMR) in India has declined from 220 per 100,000 live births during 2005-09 to 190 per 100,000 live births during 2010-2014 (World Bank 2005-14), the infant mortality rate (IMR) has dropped from 56 in 2005 to 41 in 2013 (World Bank 2005-14). The Government of India has been taking initiatives from time to time to address the health needs of disadvantaged women and children by providing free medical care. However, a high level of morbidity and mortality still prevails, driven by lack of proper healthcare facilities, in-time medical support, malnutrition, and ineffective neonatal care, besides financial reasons.

In April 2005, the Government of India launched the National Rural Health Mission (NRHM). The mission aimed at strengthening health facilities by enhancing and improving their infrastructure, increasing availability of equipment and essential supplies, and promoting demand through community-level processes. In 2005, the NRHM introduced the Janani Suraksha Yojana (JSY), a scheme to promote institutional delivery and decrease neonatal and maternal deaths in the country. However, the JSY was not able to achieve its goals, as mere cash incentives were not enough to attract people to public institutions. On the contrary, the scheme encouraged corruption, while beneficiaries continued to spend on services such as diet, diagnostics, transport, etc.

While beneficiaries could avail the services of private players who provide better services in terms of both quality and quantity, they are driven by the profit motive, and those in low-income groups cannot afford their services. That is why government institutions are called upon to take charge of overall health outcomes of the population and reduce their burden of spending.

Keeping this in mind, and to increase the overall effectiveness of public institutions in public healthcare, the Janani Shishu Suraksha Karyakaram (JSSK) was introduced in June 2011. The major objective of the scheme was to reduce out-of-pocket expenditure in the utilisation of antenatal care, institutional delivery, and post-natal and neonatal care. It also aimed at providing free services like medicine, diet, diagnostics, and transport to pregnant women and newborn babies up to 30 days after delivery. However, it was found that beneficiaries still incurred some costs, i.e. their out-of-pocket expenditure continued, which defeated the key objective of the scheme. Expenditures were incurred by beneficiaries mainly because they were unaware of such services and because ambulance coverage is poor in areas where the lanes are narrow.

The primary objective of this paper is to investigate whether the huge spending by the government under the NRHM, in general, and the JSSK, in particular, has reduced

beneficiaries' out-of-pocket expenditure. It focuses on the implementation status of the JSSK in the four districts of Delhi state North, South, East, West, and South-East. The study examines the pattern of spending on diet, diagnosis, medicine, and transport by beneficiaries at the aggregated and disaggregated levels, and scrutinises the socio-economic differentials in the pattern of spending and reviews whether the services are reaching the targeted population. It analyses the overall effectiveness of the scheme and uncovers various loopholes, and makes recommendations for improving the scheme that will help to devise various policy actions.

2 DATA AND METHODOLOGY

A primary survey was conducted using questionnaires across various districts of Delhi at the district, facility, and beneficiary levels. The target population for the study included women who had delivered in the preceding six months to one year, and had availed the benefits of the scheme. The geographical survey included the North, South, East, West, and South-East districts of Delhi. From each district, four facilities were taken and discussions conducted with district-level officials. From each facility, a sample of 22 beneficiaries was taken to evaluate the effectiveness of the scheme. Multi-stage random sampling was used. The collected data was processed and regressed, and examined carefully with statistical tools to investigate the overall implementation-level success and loopholes of the scheme.

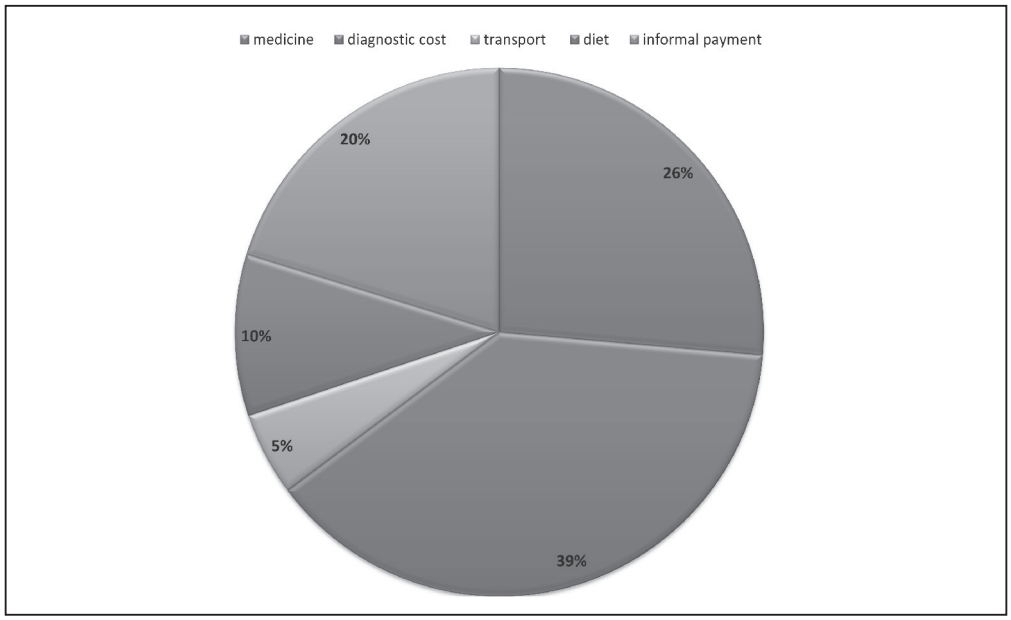
The information obtained from the beneficiaries include their socio-economic and demographic attributes, along with other factors such as awareness of the JSSK, availability and utilisation of free referral transport services, availability and utilisation of free diagnostic services, quality and quantity of food provided, and availability of drugs, health problems, and redress of sick neonates. Beneficiaries were questioned about the overall expenditure they incurred and also separately on diet, diagnostics, medicine, and transport, along with their satisfaction levels regarding each component of JSSK services.

The information obtained from the JSSK service provider includes the provision of food, free transport and diagnostics, availability of drugs, reasons of maternal deaths, flaws in JSSK implementation, yearly performance, and funds sanctioned and utilised.

3 RESULTS

The survey revealed that even under the JSSK, beneficiaries incurred substantial out-of-pocket expenditure on services. While there was a difference in the pattern of expenditure on various service components (diet, diagnostics, transport, and medicine), the overall expenditure incurred by the beneficiaries was significant. Lack of awareness was a major challenge for the efficacy of the scheme. Interestingly, despite the lack of awareness of the JSSK schemes and its provisions, most beneficiaries reported being satisfied.

Figure 1 Average expenditure on services by beneficiaries (2013-14, %)



From Figure 1, we observe that spending on diagnostics constitute the largest proportion of the total expenditure incurred by beneficiaries. While the scheme allocates the largest share to diagnostics, beneficiaries spend the highest on these services. This may be due to the lack of basic equipment at healthcare facilities. A similar trend was observed in expenditure on medicine and informal payments (for example, gifts to the hospital staff for delivery). However, diet and transport constituted a smaller proportion to total expenditure. Thus, it can be asserted that out-of- pocket expenditure (OOPE) continues to be huge.

Table 1 shows that the average expenditure of a beneficiary on maternal health by socio-economic characteristics (including medicine, diagnostics, transport, and informal payment) was high among the 35-49 age group. Across all age groups, the cost incurred on diagnostic services was higher than on other services. The expenditure incurred on diet was higher for beneficiaries under 20. Spending on maternal health was high among highly educated beneficiaries, the general castes, the unemployed, low-income groups, and Rashtriya Swasthya Bima Yojana (RSBY) cardholders. At the educational level, highly educated beneficiaries spent the most on medicine, diagnostics, transport, diet, and informal payments. Across religions, spending was high among Sikhs on medicines, diagnostics, diet, and informal payments. Expenditure on medicines was high among the general castes, skilled workers, those in the Rs 2000-Rs 5000 income group, and RSBY cardholders.

Table 1 Average expenditure by beneficiary on maternal health by socio-economic characteristics

Characteristics		Medicine (Rs.)	Diagnostic (Rs.)	Trasnpor-tation (Rs.)	Diet (Rs.)	Informal Payment (Rs.)	Total Medical Cost (Rs.)
Age	<20	343	500	212	600	387	1258
	20-34	784	1132	145	289	583	1472
	35 and above	921	1300	266	230	1500	2239
Education	Illiterate	771	992	143	263	512	1219
	Primary	505	858	136	293	431	1081
	Secondary	781	1095	148	295	670	1595
	Above secondary	985	1583	194	333	819	2341
Religion	Hindu	764	1150	152	296	570	1519
	Muslim	777	1001	114	263	656	1298
	Christian	633	800	633	300	450	2467
	Sikh	1130	1444	48	325	1017	2026
	Others	0	600	200	0	0	400
	No response	550		258	200	367	858
Caste	General	908	1202	156	313	698	1676
	OBC	677	1262	130	291	514	1645
	SC	800	978	158	276	544	1271
	ST	75	350	135	100	150	255
	No response	567	550	120	200	488	1143
Occupation of Husband	Skilled	875	1187	140	299	662	1637
	Unskilled	740	926	151	247	539	1237
	Unemployed	600	1233	700		975	2317
	Others	465	1552	162	415	544	1980
	No response	0	2700	0	0	0	2700
Income	<2000	0	3075	0	0	0	3075
	2000-5000	973	850	126	246	439	1071
	>5000 to <10000	732	923	141	295	508	1295
	>10000	778	1478	177	295	768	1942
Cards	BPL	894	968	113	220	516	1311
	RSBY	1350	700	175	100	1600	1870
Overall		776	1129	150	291	595	1493

Overall, the average expenditure was Rs 776 on medicine, Rs 1129 on diagnostic cost, Rs. 150 on transport, Rs 291 on diet, and Rs 595 on informal payments. Thus, as noted before, diagnostic costs form a significant part of the total expenditure incurred by a beneficiary. The lack of proper infrastructure could be a possible reason for such high levels of expenditure on diagnostic services.

Table 2 Share of neonatal expenditure by beneficiaries by socio-economic characteristics

		Share of neonatal expenditure (%)			Share from total expenditure (%)			
		Child treatment	Referred child case	Child Medicine	Child treatment	Referred child case	Child Medicine	Neonatal expenditure
Age	20-34	30	28	43	1	1	1	2
	35-49	56	0	44	5	0	4	8
Education	Illiterate	2	57	41	0	1	1	2
	Primary	0	0	100	0	0	1	1
	Secondary	48	3	49	1	0	1	2
	Above secondary	47	18	35	2	1	2	4
Religion	Hindu	34	27	39	1	1	1	3
	Muslim	29	1	70	1	0	2	2
Caste	General	48	12	40	1	0	1	2
	Other Backward Class	47	0	52	1	0	1	2
	Scheduled Caste	20	40	40	1	2	2	4
	No response or do not know	0	0	100	0	0	1	1
Occupation of Husband	Skilled	32	37	32	1	1	1	3
	Unskilled	35	8	56	1	0	2	3
	Others	100	0	0	0	0	0	0
Income (in Rs.)	2000-5000	16	0	84	1	0	3	4
	>5000 to <=10000	14	46	40	0	1	1	2
	>10000	57	9	34	2	0	1	3
BPL	Yes	59	8	33	4	1	2	7
	No	19	32	49	0	1	1	2
RSBY	Yes	0	100	0	0	2	0	2
	No	34	22	44	1	1	1	3
	Total	34	23	43	1	1	1	3

Table 2 depicts the share of neonatal expenditure by beneficiaries by socio-economic characteristics. The survey revealed that the percentage share of child treatment out of total expenditure on neonatal cases is high among the 35-49 age group, Hindus, candidates with secondary education, the general castes, other occupation of beneficiary's husband, the high-income class, and below poverty line (BPL) cardholders. But in the case of child referred, the percentage share is high among the beneficiaries of 20-34 years age, illiterate, Hindus, SCs, skilled workers, candidates with income more than Rs 5000 to Rs. 10000, no BPL family, and RSBY cardholders. More than 50 per cent of primary educated beneficiaries, Muslims, OBCs, unskilled workers, and candidates in the Rs. 2000-Rs. 5000 income group spent on

child medicine. Overall, a share of 34 per cent is spent on child treatment, 23 per cent on referred child cases, and 43 per cent on child medicine.

Spending on transportation is found to be the highest among all age groups and education categories. Hindus, Muslims, and Sikhs spent less than Christians, who spent the highest on medicine, diagnostics, and transportation. Considering caste, husband's occupation, family income, and cardholding, the highest proportion of spending was on transportation. Thus, transportation needs to be strengthened, as this would considerably reduce beneficiary expenditure.

By socio-economic characteristics, spending on medicine is found to be the highest among the 35-49 age group and RSBY cardholders (60 per cent). Spending on diagnostic tests is more than 50 per cent among all groups. Diagnostics was one of the factors where all the groups spent more than the other facilities; this indicates that the lack of proper laboratory services is one of the major hurdles in the smooth implementation of the JSSK. More than 90 per cent of beneficiaries among all categories spent on transportation. Spending on diet is also more than 50 per cent among the 35-49 age group, educated up to secondary school and above, Sikhs, skilled workers and the above-Rs 5000 income category. It was also observed that more than 30 per cent of beneficiaries who make informal payments went to the hospital staff. The segregation of the data by district reveals that in the North, South, and West districts, most of the expenditure was on transportation, but in the East district, a high amount of expenditure was incurred on both diagnostics and transportation. In the South-East district, beneficiaries spent more on drugs and transport, while among other facilities most beneficiaries spent on transport.

Figure 2 Spending on health by beneficiaries aware of the Janani Shishu Suraksha Karyakaram

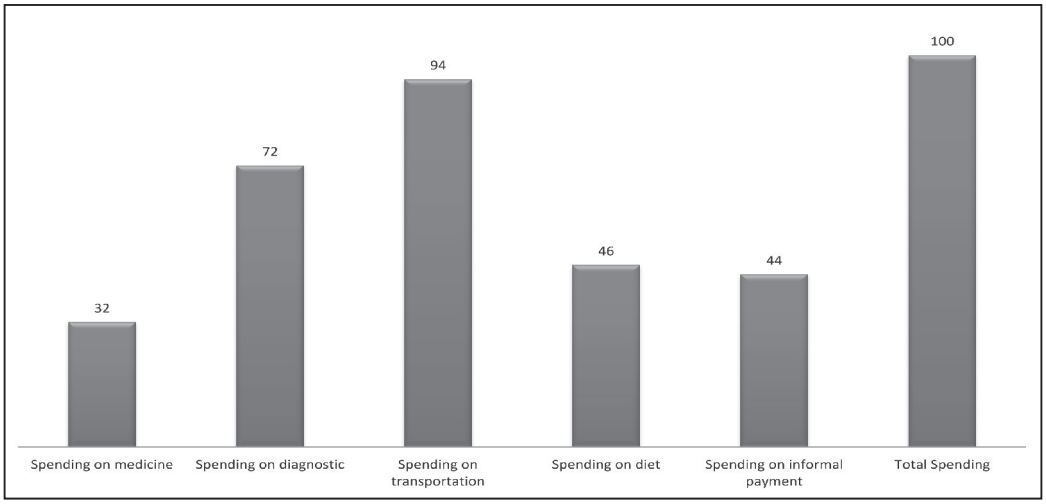


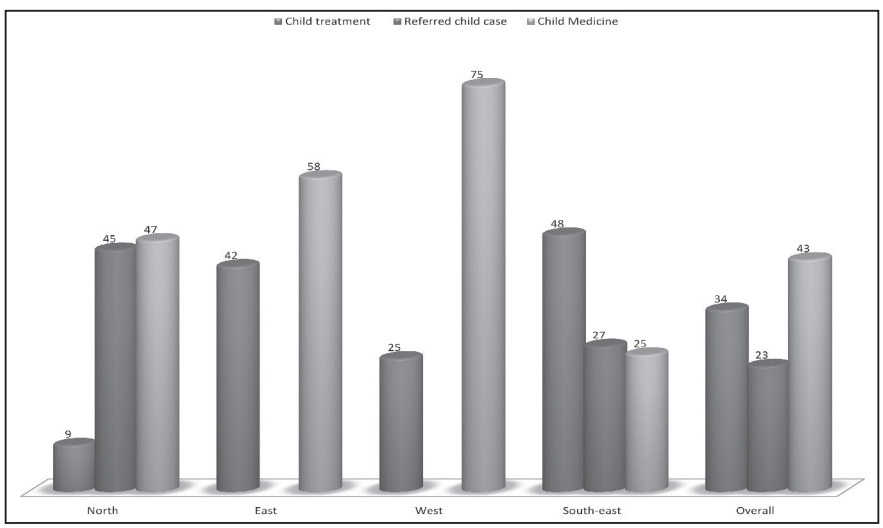
Figure 2 reveals expenditures incurred by beneficiaries who were aware of the JSSK scheme and its benefits. The spending on transportation was the highest, followed by spending on diagnostics.

Those who went to private clinics for antenatal care (ANC) incurred higher OOPE due to huge informal payments. It was also found that spending on diagnostics is higher on caesarean sections than on normal deliveries. Similarly, informal payment is high in the case of delivery at community health centres (CHC).

Expenditure incurred on the child after delivery (including child treatment, neonatal expenditure, and child medicine) is found to be high among the 20 34 age group. Neonatal expenditure is high among Hindus, Scheduled Castes, skilled workers, the high-income class, and BPL families.

Expenditure on child healthcare is highest among those unaware of the JSSK. Child medicine constituted a substantial part of the total cost incurred by beneficiaries. This kind of expenditure is highest in the West district and next-highest in the East. It was further observed that the percentage share on child treatment was high among beneficiaries in the South-East district.

Figure 3 Percentage share from neonatal expenditure



Further, characterising the spending according to the components of JSSK, the survey revealed that the percentage share of diagnostic cost was the highest. Segregation by district revealed that the spending on diagnostics was 68 per cent in the South district (the highest) and 63 per cent in the West district. Overall, 15 per cent was spent on medicine, with the West district spending the highest at about 24 per cent, followed by the South-East district at 16 per cent. Spending on transportation is less than 10 per cent across all the districts, which is

considered quite low, considering the vast majority of beneficiaries who would want to avail the service. Spending on diet is also less than 10 per cent; the North district, which spent 13 per cent, is an exception. The survey revealed that beneficiaries in the West district made the most informal payments (25 per cent).

On analysing socio-economic characteristics, it was found that the percentage share of child medicine was highest for beneficiaries in the 35 49 age group (24 per cent), 17 per cent for illiterates, and 26 per cent for Christians. It was also high among those who were not aware of the JSSK, those who availed ANC at CHCs, delivered at government hospitals, and those who underwent caesarean sections. Christians, those in the 'other religion' category, and Scheduled Tribes spent more on transportation. Beneficiaries spent considerably less on diet than on other components. Of beneficiaries under the age of 20 years, 19 percent spent sufficiently on diet. However, more than 20 per cent paid the hospital staff informally.

On the whole, it is clear that beneficiaries incurred significant OOPE despite the provision of free services under the JSSK. This implies that there still exists some constraints that prevent 100 per cent coverage. Some of the constraints are genuine, like lack of space for ambulance to enter the lane, lack of sufficient tools (gas, utensils, etc.) to provide cooked food (in which case raw food is served), etc.

From Figure 4, it can be concluded that beneficiaries who underwent caesarean section deliveries incurred a higher mean OOPE than those who underwent normal deliveries and that the cost of diagnostics constituted a major share of their total medical cost. Therefore, the infrastructure and other necessary equipment required for such complicated cases needs to be made available.

Figure 4 Costs associated with normal and caesarean section delivery

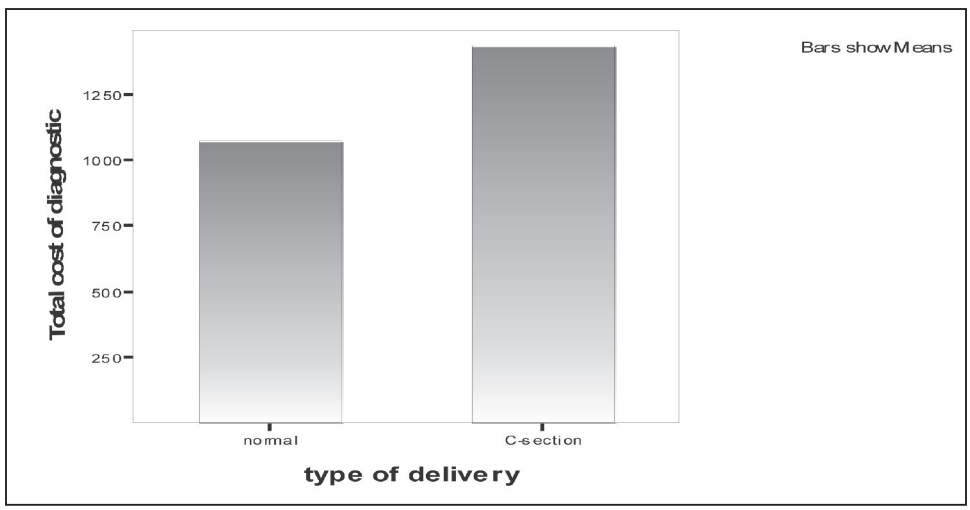
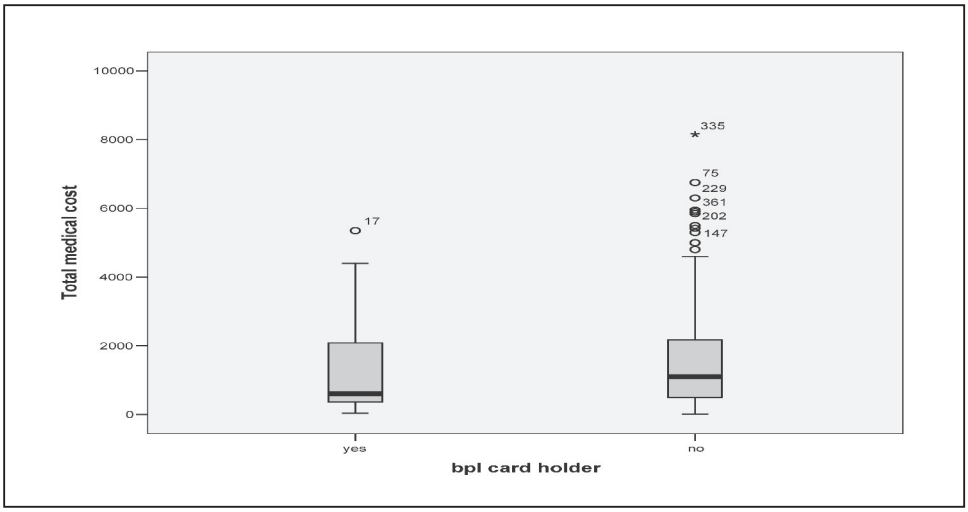


Figure 5 Expenditure incurred by below-poverty-line cardholders (2013-14)



The average cost incurred by BPL cardholders is lower than that of those who are not BPL cardholders. However, even BPL cardholders, the target population of the JSY, incurred costs even after the JSSK. Of all BPL beneficiaries, 60 per cent incurred an OOPE in excess of the mean cost of Rs 1,491. Thus, we find that the scheme did not benefit BPL cardholders either.

Figure 6 Impact of awareness of the Janani Shishu Suraksha Karyakaram on total medical costs

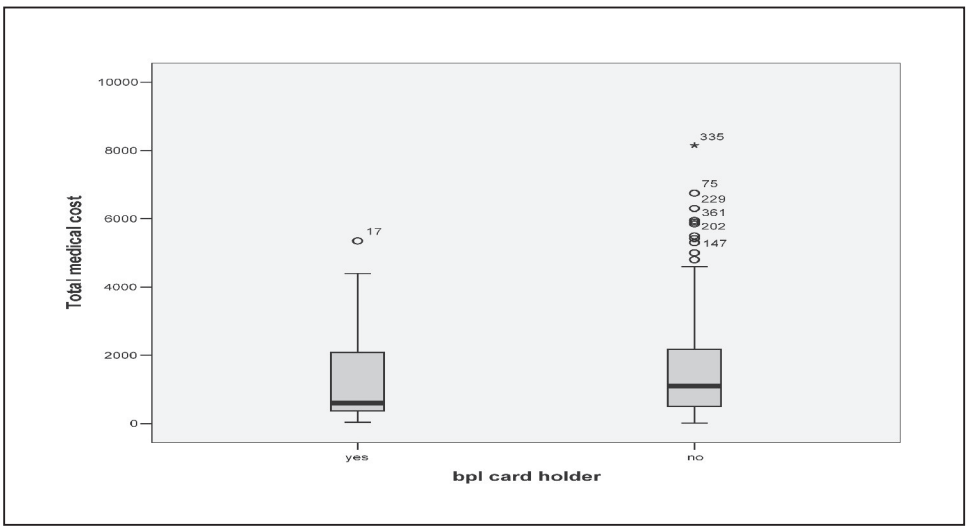


Figure 6 indicates that even beneficiaries who are aware of the JSSK incurred huge costs, but that the costs were less than for those who were not aware of the JSSK. This indicates the lack of infrastructure and other basic facilities. Thus, there is not only a need to spread more awareness about the scheme, but also more work should be done to ensure smooth access to all the services, timely availability of all necessary drugs and other necessary perquisites should be there to ensure the overall effectiveness of the scheme.

4 DISCUSSION

Total health expenditure in India stood at 4.2 per cent of GDP in 2010. This percentage is greater than that in Pakistan and Sri Lanka, but far below the 9 per cent of GDP spent by member states of the European Union (Arun and Kumar 2013). If we look at public health expenditure, which is an inclusive term for the expenditure made by the centre, state, and local governments, India spends only around 1 per cent of GDP. Arun and Kumar concluded that although there has been an increase in absolute expenditure on health, the growth in the share of health expenditure as a proportion of GDP has remained moderate over the years (ibid.). Though the government has come out with a variety of schemes to provide affordable services and reduce OOPE, beneficiaries still have to incur costs on health.

The maternal and infant mortality rates are higher in India than in other countries, primarily because the cost of medical treatment is huge. Of all pregnant women, 25 per cent have difficulty in accessing healthcare facilities because costs are high (Goyal, Singh, and Mudey 2014). Private players provide better services, but are too expensive for the common man; that is why the government has to step in to provide affordable healthcare services. The JSSK was introduced mainly to provide affordable healthcare services to disadvantaged groups. While government institutions are relatively less expensive, problems persist (such as inadequate availability of beds in hospitals and the lack of timely provision of treatment, basic infrastructure, and human resources).

A study by Mohanty and Srivastava (2012) concluded that most deliveries in the states of Assam, Bihar, Chhattisgarh, and Jharkhand were conducted at home without any medical assistance, whereas in Kerala and Tamil Nadu, most deliveries were conducted with medical assistance. Further, the mean OOPE on caesarean section deliveries was approximately four times that of normal deliveries. Transportation cost is higher for rural women than for urban women (Mohanty and Srivastava 2012).

The survey conducted in various districts of Delhi reveal similar results: OOPE is high because the scheme is not implemented properly, and because basic infrastructure and human resources are inadequate, and people lack awareness about the benefits of the scheme. Similar to Mohanty and Srivastava (2012), the mean expenditure on all the services is found to be higher for caesarean section deliveries than for normal deliveries.

Mostly, ambulances failed to reach the concerned beneficiary on time or at all. There is little utilisation of referral transport in Delhi, due either to the lack of awareness of the provision or to the delay in arrival. In Delhi, the problem is further exaggerated by narrow lanes.

Because most maternity homes in Delhi lack the infrastructure, they provide bread, milk, biscuits, and eggs/cheese. This compels beneficiaries to spend on a proper diet or to move to the district hospital, where cooked meals are provided thrice a day. This was the case in all the districts surveyed.

Because most government institutions lack the infrastructure and human resources for diagnostics, they referred beneficiaries to private screening centres, where they had to spend out-of-pocket. Thus, overall, beneficiaries had to incur huge costs on all the four components diet, diagnostics, transport, and drugs.

5 CONCLUSION

The above study makes clear that the JSSK is not able to meet its desired outcome of reducing beneficiaries' OOPE. Although the scheme provides cashless services, a general lack of infrastructure, human resource, and constant shortage of drugs compels beneficiaries to incur huge costs on their own. This implies that the total government expenditure on the scheme is inadequate, and a lot more needs to be done to improve its overall efficacy. The government should also focus on creating awareness about the JSSK scheme and its benefits. There is a strong need to run campaigns and spread awareness among the lower socio-economic sections of society so that they can benefit more from the scheme.

Free medicine provided under the scheme includes medicines given during ANC, INC, and PNC up to six weeks, which includes management of normal and caesarean section delivery and childbirth. Immunisation drugs and vaccines are also provided for better health of the child, but an insufficiency of these curbs the overall benefits of the scheme.

The provision of free diet to mothers after delivery is important, as they need a proper diet, which may not be available at their poverty-stricken homes; however, the upper limit of Rs 100 is inadequate in the era of growing inflation. The meal should include nutritious food, like cooked meals, soups, etc., and not breads and raw eggs that are served due to the lack of kitchens and to other constraints.

The provision of free transport facility from home to the healthcare centre and a drop back is rendered useless by bottlenecks such as the stigma attached to ambulance services, lack of awareness, and the irregularity of ambulance services.

To prevent the poor from falling further into a state of poverty due to healthcare expenses, the participation of non-profit organisations in improving the overall health outcomes of this group is paramount. The government must take initiatives to raise awareness of the benefits and various measures of family planning and also ensure the timely availability of necessary drugs and other infrastructure needed to improve the overall efficacy of the JSSK scheme.

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