Assessing Impact of India's National Health Insurance Scheme (RSBY): Is There Any Evidence of Increased Health Care Utilisation?

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Abstract

Providing quality health care to all is a policy commitment India made by becoming a signatory in the Alma Ata declaration. India is working towards providing Universal Health Coverage through its National Health Policy.However, to achieve this goal; it needs to reach out to the poorest and the mostvulnerable sections of the society, andmake available affordable health care to them. Rashtriya Swasthya Bima Yojana (RSBY) is a step in this direction that insures these families for a minimum sum, to increase their access to health care and protect against catastrophic health expenses. This paper has tried to analyse if the insurance instrumentsincluding RSBY have been able to increase health service utilization in the country, especially by the poorest quintiles of the population.

The findings from NSSO data,for the states which have completed minimum three years of RSBY implementation, compared for the year 2011-12 against year 2007-08, the baseline year, shows no change in the health service utilization pattern.On the contrary, in some states, it is showing a negative trend. The analysis also shows that the expenditure for outpatient treatment has a substantially high share of the overall household expenditure, and could actually be catastrophic for resource poor families. Such expenditures being left out of the ambit of RSBY is a matter of concern.

Key Words: RSBY, Health Care Utilisation, Institutional Medical Care, Non-Institutional Medical Care, Out-of Pocket expenditure, catastrophic health expenditure

Introduction

In the last five years, there has been a remarkable increase in the health insurance coverage of people in India and roughly around a fourth of the population isnow covered under health insurance. This coverage has been possible due to government sponsored health insurance programs like Rajiv Aarogyasri in the state of Andhara Pradesh, Vajpayee Aarogyasri in state of Karnataka, other state based insurance programs in Tamil Nadu, Rajasthan etc. and currently the central government sponsored Rashtriya Swathya Bima Yojna (RSBY) which is a national health insurance program for the resource poor families.

There are other schemes like Employees State Insurance Scheme (ESIS) and the Central Government Health Scheme (CGHS) which provide extensive coverage and benefits to the insured, however, their population coverage is very limited and only cover formal sector employees. Private health insurance coverage again is very limited both in terms of population and benefits (Ellis, R. P., Alam, M., & Gupta, I., 2000, A Critical Assessment of the Existing Health Insurance Models in India, 2011, Carrin, G., 2002, Forgia, G. L. & Nagpal, S., 2012).

RSBY was launched by Government of India in the year 2007 and is being implemented by the Ministry of Labour and Employment, Government of India. The Central Government is partnering with various State Governments to execute this in every state in India. RSBY aims to benefitclose to seventy million resource poor households out of which it has so far covered around 50 percent of the targeted families.

RSBY provides coverage of INR 30,000 per family on a family floater basis every year, covering up to five members. The benefit coverage includes almost all secondary care services and day care services which do not require hospitalisation and includes even maternity coverage. The coverage amount for the secondary care seems to be right because a study in Karnataka shows that on an average, poor households spend around INR 20,000 on hospitalisation every year (Rajasekhar, Berg and Manjula 2009). Other state based schemes like the state of Tamil Nadu however, provide coverage of INR 2 Lakhs per annum per family and also cover tertiary care services. Similarly, Vajpayee Aarogyasri in the state of Karnataka provides coverage of both secondary and tertiary care services uptoINR 2 Lakhs every year for every family. Kerala state has now extended the coverage of RSBY to above poverty line (APL) families and the state of Himachal Pradesh has increased the RSBY coverage amount to INR 1.75 Lakhs.

The key objective of thepublicly financed health insurance scheme is to provide financial security against out-of-pocket and catastrophic health expenditure to the resource poor households foreither secondary care or tertiary care services or both. The other objective is to provide access and improve utilisation of health care services by these households. RSBY is a novel attempt in the country to provide such coverage to the resource poor families in the entire country. While there have been some evaluations of RSBY in terms of enrollment and utilisation by Nandi, et al (2012); Devadasan N. (2011); Devadasan N. et al (2013); Selvaraj, S. & Karan, A. K. (2009); Selvaraj, S. & Karan, A. K. (2011) and Das & Leino (2011), the current paper deals with examining the impact of RSBY in terms of change in utilisation pattern using NSSO Consumer Expenditure Survey (CES) data of the year 2011-12 against the year 2007-08of Ministry of Statistics and Program Implementation (MoSPI), Government of India.

Methodology

The current paper has used the per capita consumption expenditure data collected in India by the National Sample Survey Organisation (NSSO) for the years 2007-08 and 2011-12. The sample size in the year 2007-08 was 2,42,369 and 2011-12 were2, 03,313 householdsrespectively. In the Consumer Expenditure Survey (CES), the NSSO collects data on household expenditure on wide range of items which includes expenditures on institutional and non-institutional health care alongwith the expenditure on other household items. The data for the institutional and non-institutional care are collected separately. For institutional care, the recall period is last 365 days and for the non-institutional care the recall period is last 30 days. However, finally the expenditure is presented on monthly per capita basis. The expenditure includes expenditure on drugs and medicines, pathological and diagnostic tests, fees to doctors and nurses, hospital stay and other related health expenditure. These are collected separately for different disease episodes and are added to get the total expenditure under institutional and non-institutional care.

The current paper analyses the expenditure pattern on medical care, both institutional and non-institutional, using NSSO Consumer Expenditure Survey data for the year 2007-08 and 2011-12, and to see if there was anychange in the expenditure on institutional care in the year 2011-12 compared to the year 2007-08 due to implementation of RSBY. Since the per capita medical expenditure of NSSO-CES also includes expenditures which are reimbursed by other sources including insurance companies, one may expect that the reported expenditure in the year 2011-12 would be higher for the institutional care expenses compared to the year 2007-08. RSBY provides support for almost all hospitalisation services which would have encouraged the families to utilise necessary institutional services.

For the purpose of analysis, only those states wereselected which have completed 3 to 5 years of RSBY implementation. Hence Bihar, Chhattisgarh, Gujarat, Kerala, Uttar Pradesh, Haryana, Himachal Pradesh, Jharkhand, Punjab, Uttrakhand and West Bengal were included in the analysis. The expenditure data for the year 2007-08 was treated as baseline monthly per capita medical expenditure in the selected states. This has beencompared with the monthly per capita medical expenditure data for the year 2011-12 to see whether there was any positive change in the medical expenditure pattern. Again, for the analysis, only expenditure data from rural areas has been used because RSBY covers large proportion of rural population who are below the poverty line (BPL).

Analysis and Results

The per capita medical expenditure of 2011-12 was compared with 2007-08 data. There was also a comparison between per capita institutional medical expenses and per-capita non-institutional medical expenses with respect to total per capita expenditure to see their proportionate burden on the total expenditure. Though institutional medical expenses are catastrophic in nature particularly for the resource poor households, even the burden of non-institutional medical expenses is very high and carry a risk ofimpoverishing families if the resource poor families do not get any financial support (Selvaraj, S. & Karan, A. K. 2009).

Table-1: Percentage of per capita institutional medical expenses to total per capita expenses

States	2007-08 (% per capita institutional medical expenses to total per capita expenses)	2011-12 (% per capita institutional medical expenses to total per capita expenses)
Bihar (Bh)	0.36	0.91
Chhattisgarh (CG)	0.81	0.49
Gujarat (Guj)	0.95	3.29
Haryana (Har)	1.38	1.09
Himachal Pr. (HP)	2.33	1.48
Jharkhand (Jh)	0.45	0.21
Kerala (Ker)	4.48	3.85
Punjab (Pun)	3.26	1.12
Uttar Pr. (UP)	1.78	2.11
Uttrakhand (Ukd)	3.53	0.28
West Bengal (WB)	4.48	1.41

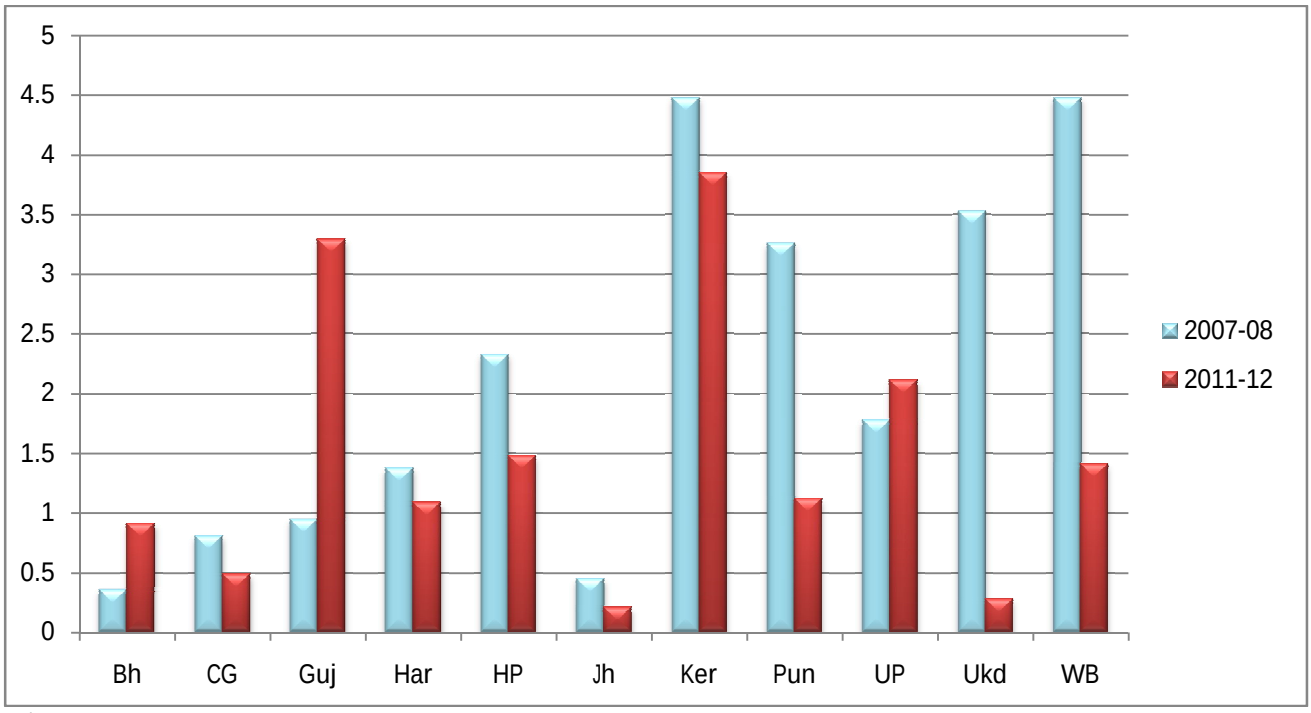

Figure-1

The table-1 and figure-1 show a comparison of the percentage of monthly per capita institutional medical expenses to the total monthly per capita expenses between the year 2007-08 and 2011-12. The comparison shows nosubstantial increase in the per capita institutional care utilization despite RSBY being implemented and covering almost all types ofhospitalization cases. Only in the case of Gujarat, there was an increased utilisation of institutional medical services in the year 2011-12 compared to year the 2007-08.

There was also a marginal increase in per capita institutional care utilization in the states of Bihar and UP. By contrast, inChhattisgarh, Haryana, Himachal Pradesh, Jharkhand, Punjab, Uttrakhand and West Bengal, utilization of institutional services hadactually dropped.

Table-2 and figure-2 present the monthly per capita (MPC) expenses of Institutional and Non-Institutional medical care for both the reference periods in absolute terms without adjusting for inflation for two different years of expenditure data.

Table-2: Monthly Per Capita (MPC) expenses of Institutional and Non-Institutional medical care for 2007-08 and 2011-12 in INR

	2007-08		2011-12	
	MPC Institutional Expenses	MPC Non-Institutional Expenses	MPC Institutional Expenses	MPC Non-Institutional Expenses
Bihar (Bh)	2.15	16.73	9.14	40.28
Chhattisgarh (CG)	4.73	25.41	4.35	40.96
Gujarat (Guj)	8.34	23.52	48.04	49.27
Haryana (Har)	14.23	42.42	20.42	68.99
Himachal Pr. (HP)	26.81	49.14	27.53	73.87
Jharkhand (Jh)	2.64	18.73	1.89	30.95
Kerala (Ker)	61.98	97.06	96.65	148.12
Punjab (Pun)	41.45	67.7	23.26	132.27
Uttar Pr. (UP)	12.1	41.09	22.1	69.74
Uttrakhand (Ukd)	31.84	41.38	4.41	49
West Bengal (WB)	31.41	35.64	16.13	68.94

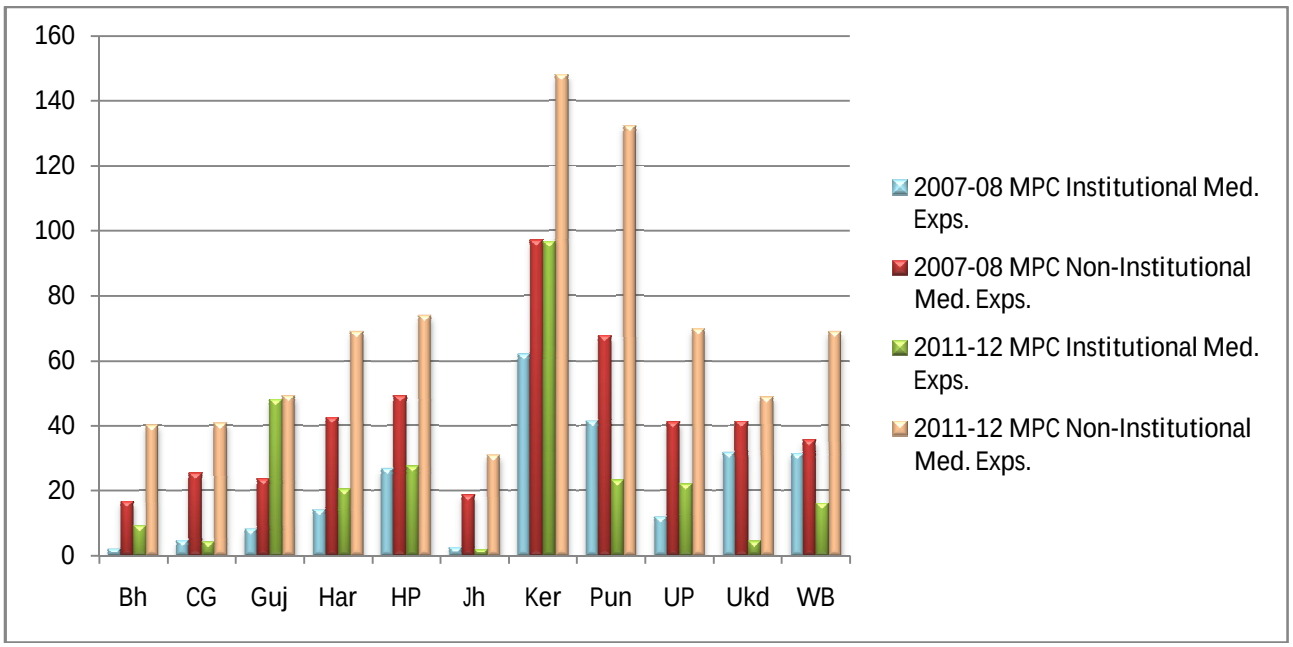

Figure-2

These show the institutional expenses had increased in the states like Bihar, Gujarat, Haryana, Kerala and Uttar Pradesh during the year 2011-12 in absolute terms as compared to the year 2007-08, without adjusting for inflation. However, in states like Chhattisgarh, Jharkhand, Punjab, Uttrakhand and West Bengal, this haddecreased. In Himachal Pradesh, it remained more or less the same. This means that in the states where the monthly per capita institutional expenses haddecreased or remained constant, the benefit of RSBY was yet to show.

Non-institutional expenses had increased in all the states under study during the year 2011-12 as compared to the year 2007-08. It should also be noted that, in both the reference periods, the monthly per capita expenses on non-institutional care was very highcompared to the monthly per capita expenses of institutional care in all these states.

This shows that the burden of cumulative non-institutional medical expenditure was higher than institutional care which is not covered under RSBY and hence borne by the households themselves.

However, to make the comparison of monthly per capita institutional and non-institutional expenses during the year 2011-12 with the year 2007-08 in real terms, the prices of 2011-12 were adjusted for inflation using GDP deflator of India.

Table-3: Monthly Per Capita (MPC) expenses of Institutional and Non-Institutional medical care for both the reference periods in INR after adjusting for inflation

	2007-08		2011-12	
States	MPC Institutional Expenses	MPC Non-Institutional Expenses	MPC Institutional Expensesat 2007-08 price	MPC Non-Institutional Expenses at 2007-08 price
Bihar (Bh)	2.15	16.73	6.93	30.52
Chhattisgarh (CG)	4.73	25.41	3.30	31.03
Gujarat (Guj)	8.34	23.52	36.40	37.33
Haryana (Har)	14.23	42.42	15.47	52.27
Himachal Pr. (HP)	26.81	49.14	20.86	55.97
Jharkhand (Jh)	2.64	18.73	1.43	23.45
Kerala (Ker)	61.98	97.06	73.23	112.23
Punjab (Pun)	41.45	67.7	17.62	100.22
Uttar Pr. (UP)	12.1	41.09	16.74	52.84
Uttrakhand (Ukd)	31.84	41.38	3.34	37.13
West Bengal (WB)	31.41	35.64	12.22	52.23

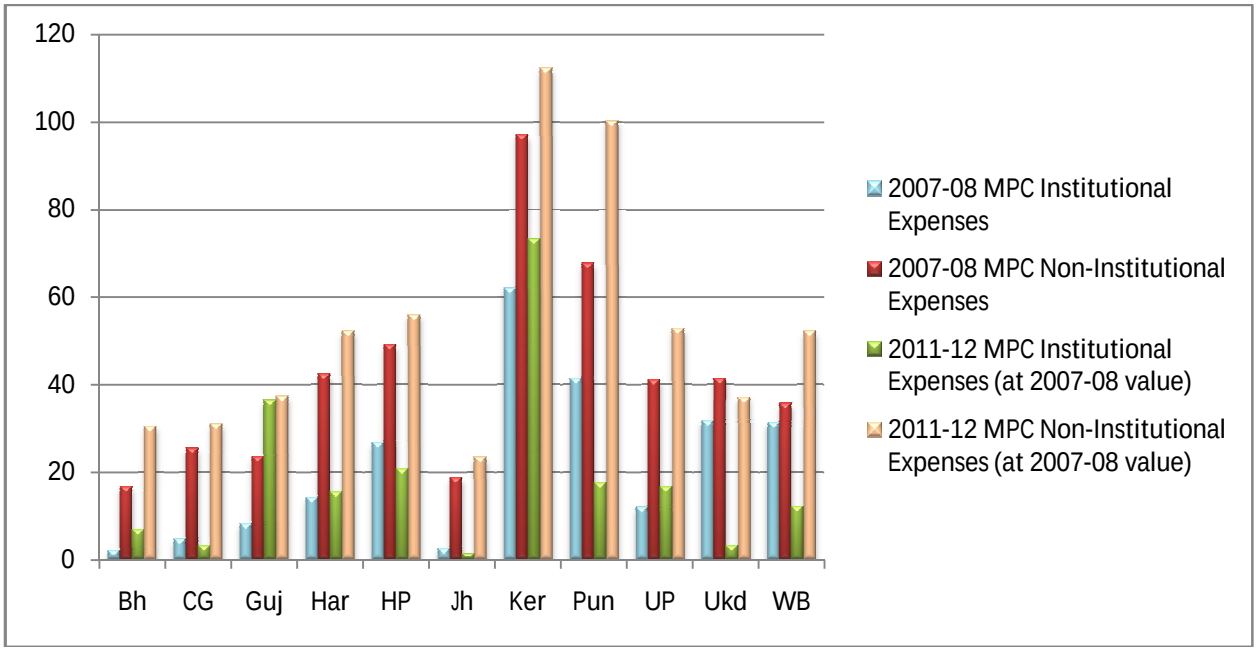

Figure-3

Table-3 and figure-3 again show the monthly per capitainstitutional and non-institutional expenses for both the reference periods after adjusting the price of 2011-12 for inflation keeping price of the year 2007-08 as base price. The expenses for the year 2011-12 had been adjusted for inflation to make it comparable with 2007-08 price using GDP deflator (http://www.tradingeconomics.com/india/gdp-deflator website accessed on dated 02.10.2013). The price difference in real terms between 2011-12 and 2007-08 gives a mixed picture. The institutional expense had increased slightly in the states of Bihar, Gujarat, Kerala and Uttar Pradesh while it had decreased instates like Chhattisgarh, Himachal Pradesh, Jharkhand, Punjab, Uttarakhand and West Bengal. In Haryana, the monthly per capita institutional expensedid not show much variation in these two periods. This could imply that the benefits of RSBY were yet to reach such states where the monthly per capita institutional expenses had either decreased or remained unchanged.

In the case of non-institutional expenses, almost all the above states showedan increase in monthly per capita expenses even in real terms after adjusting for inflation in the year 2011-12 compared to the year 2007-08. This shows that the burden of non-institutional medical care is in increasing trend and eats up a substantial portion of household expenses.This again gives a strong ground for including non-institutional health care services under publicly financed health insurance schemes.

Table-4: ***Percentage of MPC expenses of Institutional and Non-Institutional medical care for both the reference periods to the total MPC expenses***

	2007-08		2011-12	
States	Percentageof MPC Institutional Expenses to total MPC expenses	Percentage of MPC Non-Institutional Expenses to total MPC expenses	Percentage of MPC Institutional Expenses to total MPC expenses	Percentageof MPC Non-Institutional Expenses to total MPC expenses
Bihar (Bh)	0.36	2.80	0.91	4.01
Chhattisgarh (CG)	0.81	4.37	0.49	4.65
Gujarat (Guj)	0.95	2.69	3.29	3.37
Haryana (Har)	1.38	4.10	1.09	3.67
Himachal Pr. (HP)	2.33	4.28	1.48	3.97
Jharkhand (Jh)	0.45	3.16	0.21	3.45
Kerala (Ker)	4.48	7.02	3.85	5.90
Punjab (Pun)	3.26	5.32	1.12	6.37
Uttar Pr. (UP)	1.78	6.04	2.11	6.66
Uttrakhand (Ukd)	3.53	4.59	0.28	3.15
West Bengal (WB)	4.48	5.08	1.41	6.03

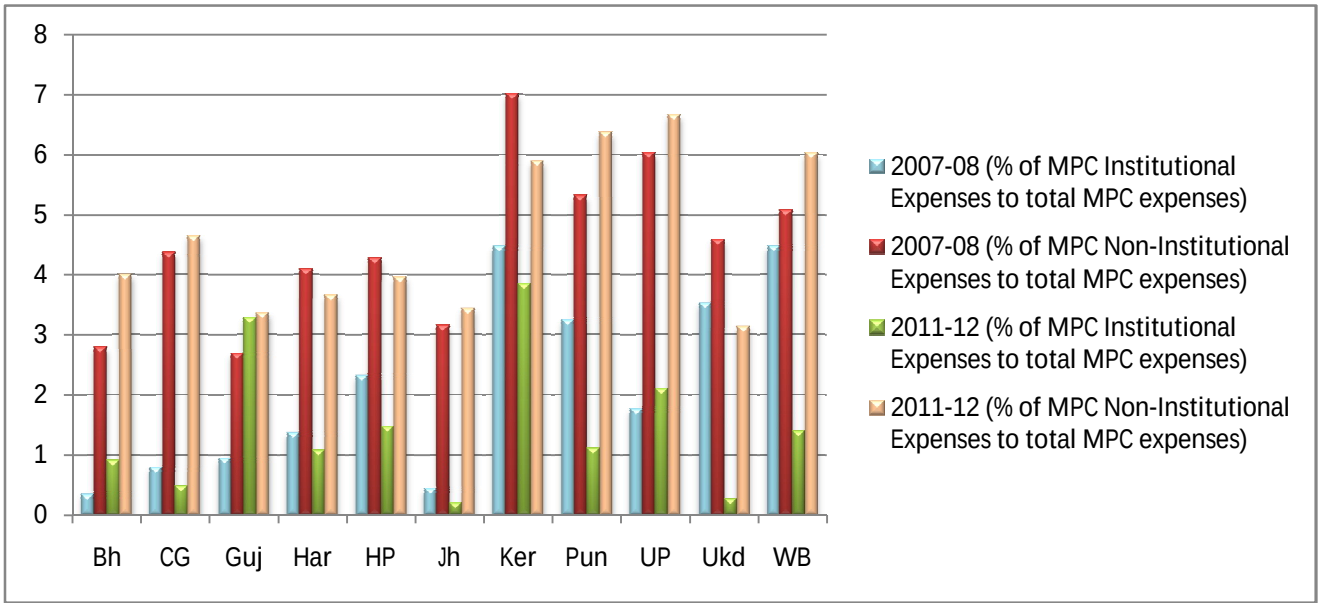

Figure-4

Table-4 and figure-4 show the percentage of monthly per capita institutional and non-institutional expenses to the total per capita expenses for both the reference periods of the selected states. It can be seen that during 2007-08, some states like Kerala, Uttrakhand and West Bengal had very high per capita institutional expenses which were 4 to 5 percent of the total monthly per capita expenses. Since RSBY had just been launched in the year 2007-08 (and may not have reached a substantial population), and states like West Bengal and Uttrakhand did not have any other state based publicly financed health insurance scheme, the expenses seem to be catastrophic for the resource poor families as Xu et al 2003 argue that, for the resource poor households, any amount of money which is going for their healthcare threatens their households basic needs and hence could be considered as catastrophic.

Next weexamined the percentage of per capita non-institutional expenses to the total per capita expenses.This is even higher compared to percentage of per capita institutional expenses to the total per capita expenses in all the states included in the analysis in both the reference periods. In some states like Kerala and UP in the year 2007-08 and Kerala, Punjab, UP and West Bengal for the reference period 2011-12, it was between 6 to 7 percent. This shows that non-institutional services, which were not covered under any publicly financed scheme including RSBY, posed a huge burden on the households.This gives a strong ground of its inclusion in all the publicly financed health insurance scheme including RSBY.

Table-5: Percentage of MPC expenses of Institutional and Non-Institutional medical care for both the reference periods to the total MPC non-food expenses

	2007-08		2011-12	
States	Percentage of MPC Institutional Expenses to total MPC non-food expenses	Percentage of MPC Non- Institutional Expenses to total MPC non-food expenses	Percentage of MPC Institutional Expenses to total MPC non-food expenses	Percentageof MPC Non- Institutional Expenses to total MPC non-food expenses
Bihar (Bh)	0.89	6.94	1.90	8.39
Chhattisgarh (CG)	1.96	10.54	0.97	9.17
Gujarat (Guj)	2.07	5.84	6.43	6.60
Haryana (Har)	2.75	8.21	2.21	7.48
Himachal Pr. (HP)	4.31	7.89	2.57	6.88
Jharkhand (Jh)	1.08	7.69	0.47	7.67
Kerala (Ker)	7.57	11.85	5.96	9.14
Punjab (Pun)	5.78	9.44	1.97	11.19
Uttar Pr. (UP)	3.78	12.85	4.28	13.51
Uttrakhand (Ukd)	7.18	9.33	0.54	5.99
West Bengal (WB)	10.63	12.06	3.21	13.70

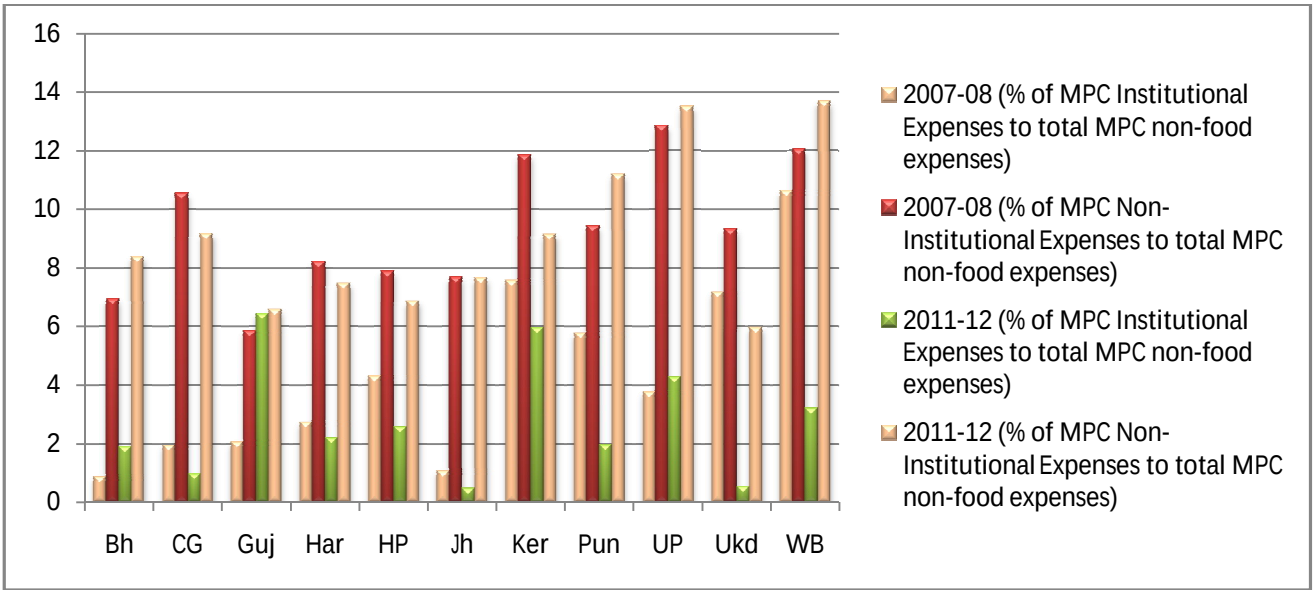

Figure-5

Table-5 and figure-5 show another measure of catastrophic health expenditure by comparing the monthly per capita institutional and non-institutional expenses with respect to monthly per capita total non-food expenditure (TNFE). It can again be seen that during 2007-08, some states like Kerala, Uttrakhand and West Bengal had a very high level of institutional expensesaccounting for 8 to 11 percent of the total monthly per capita non-food expenses. This again seems to be catastrophic for the resource poor families in the absence of RSBY or any other publicly financed health insurance scheme during 2007-08.

In the case of monthly per capita non-institutional expenses, it was at a much higher level when compared to per capita institutional expenses in all the states included in the analysis for both the reference periods. In states like Chhattisgarh, Kerala, UP and West Bengal, percentage of monthly per capita non-institutional expenses to the total monthly per capita non-food expenses were between 11 to 14 percent during the year 2007-08. Similarly, during the year 2011-12, Punjab, UP and West Bengal witnessed monthly per capita non-institutional expenses of 11 to 14 percent of the total monthly per capita non-food expenses.

Conclusion and Discussion

RSBY scheme holds immense potential of providing a decent coverage of hospitalisation care to the resource poor households, however the above analyses show that even after three to five years of RSBY implementationthe benefits were yet to reach the resource poor households in terms of increased utilisation of hospitalisation services compared to the baseline year 2007-08.

In 2011-12, barring a few states like Gujarat and Kerala, in almost every other states, monthly per capita institutional expenses had either reduced or remained constant compared to the year 2007-08, when RSBY was launched. Even in the states where the monthly per capita institutional health expenditure had increased, it is not clear whether it was due to RSBY or due to increased out-of-pocket expenses. The analyses also show that the proportion of non-institutional medical expenditure is very high in both the reference years. Again, if we add both institutional and non-institutional medical expenses, the cumulative effect is very high in all the states. This carries the risk ofimpoverishing families and threatens the household basic needs if the expenses are not covered under any insurance policy. Non-institutional services are not covered under RSBY which leaves the financial burden of non-institutional care on the resource poor households.

RSBY scheme was launched by the Central Government of India in the backdrop of high out-of-pocket expenses being borne by the families; government contribution in the health sector is very low and quality of careis of questionable standard (Das, J. & Leino, J. 2011). One of the factors for high out-of-pocket expenditure in health is due to weak public health delivery system which forces people to seek care from private providers (Bhat, R. 1993; Berman & Khan 1993; Kumar, Krishna & Kanbargi 1994; Ellis, R. P., Alam, M. & Gupta, I. 2000). NSSO 2004-05 data shows that around 72 percent of non-institutional care and 40-60 percent of institutional care was being sought from the private providers. Anumber of studies have shown that the services of the private providers are far more expensive compared to the public providers (Nandi, S., et al, 2012; Selvaraj, S. & Karan, A. K. 2009).

Devadasan N. 2011). Devadasan N. et al (2013) found that despite fixing the package rates for different services, around 60 percent patients covered under RSBY still incurred out-of-pocket expenses. One of the explanations given by the providers for charging fee for services was that the package rates fixed for most of the services were low. They avoidedadmitting some categories of non-surgical cases because those cases wereconsidered non-remunerative. Package rates in RSBY have been fixed from the providers' perspective which includes only direct costs of treatment. There is only a minimum allocation for travel and since the travel costs are quite high for the people living in distant places, they were discouraged to seek treatment (Devadasan N. et al 2013).

The hospitalization rate is very low (close to 2.5 percent) despite India facing double burden of diseases (Selvaraj, S. & Karan, A. K. 2009). Devadasan N. (2011) also found similar trend of hospitalisation in RSBY program with huge variations between different states. It ranges from 0.39 percent hospitalization in Punjab to 2.62 percent hospitalization in Kerela. The variations in hospitalization were also seen between the districts in the same state. These variations clearly indicate the differential availability of health infrastructure in different places (Devadasan N. 2011). Though Devadasan N. et al (2013) found in their study in the state of Gujarat that hospitalization rate of RSBY enrolled beneficiaries had increased to 4 percent which was above the national average, however, from the equity perspective, the utilization rates of most marginalized populations was still low. Qifei Wu (2012) reported that the factors for low utilization of healthcare under RSBY were refusal of treatment to the smart card holders, consistent decrease in premium over the years, shortage of quality medical facilities in the catchment areas, delays in issuance of smart cards and errors in information in the smart cards.

More than two-third of the out-of-pocket expenses are due to non-institutional services,and if such cases are not covered, resource poor people will tend to avoid non-institutional services which may further deteriorate their health condition and the future treatment costs would also become very high (Selvaraj, S., & Karan, A. K. 2012; Devadasan N. 2011).

The disproportionately high dependency on private expenditure in Indian health care sector is the reason for the poor families avoiding treatment or receiving low quality treatment because of the fear of spending huge proportion of their limited income on medical treatment. Even if they go for such frequent treatments of non-institutional services, they are at arisk falling into debt trap and vicious cycle of poverty. Every year millions of people are pushed below the poverty line due to high percentage of out-of-pocket expenditure (van Doorslaer et al. 2006; Balarajan Y, et al. 2011; Garg, C. C. & Karan, A. K. 2008).It is therefore a reason why RSBY should cover non-institutional services as well.

Any expenditure which threatens the household basic needs can be considered as catastrophic. According to Berki (1986), catastrophic out-of-pocket health expenditure is one which consumes a large part of the household budget and hence affects household's ability to maintain a decent living standard. Wagstaff & van Doorslaer (2003) defined catastrophic out-of-pocket health expenditure as health expenditure that exceeds a proportion of the total household expenditure, the proportion being arbitrarily fixed. However, Xu et al. (2003) argue that household's capacity to pay should be taken into account to decide the share of health expenditure as catastrophic. Hence, in the case of resource poor households, their resources are thinly stretched to meet even their basic food requirements. If a part of their resources is used for bearing health expenditure it will be catastrophic because they will have to cut their basic food requirements and it also makes them more impoverished. According to Wagstaff, A. (2008), any amount of out-of-pocket expenditure on health has a negative effect on household welfare because it deprives the household for using those resources on other goods and services which could have added to their wellbeing. If we combine both institutional and non-institutional health care costs of the resource poor households, they spend a substantialproportion of their income towards financing their health care. Because of this, a large number of people, particularly poor families, are falling into the debt trap and vicious cycle of poverty. A data from NSSO 2004 says that around 52 percent of Indian households and 64 percent of resource poor households are indebted due to institutional health care expenditure.

The above evidences highlights that even after implementation of RSBY, not many changes have been observed on the ground in terms of improvement in the health care finance. The NSSO-CES analyses for the year 2007-08 and 2011-12 show that institutional health care utilization has not increased even after 3-5 years of implementation of RSBY, and that the proportion of non-institutional medical expenses continue to be disproportionately high, with almost the entire amount being borne out of pocket, threatening the household financial stability.

While the NSSO-CES data analysis shows that the resource poor families have not been substantially benefitted through RSBY scheme, yet there is a need for a comprehensively designedpopulation level scientific study of RSBY to assess its real impact and also find out the enabling and disabling factors effecting utilization of health care under RSBY.

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