

## A Study on Assessment of Services Rendered Under the Rashtriya Swasthya Bima Yojana Scheme in Jamnagar District: A Cross Sectional Study

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### Abstract :

**Introduction:** In India, poverty is propagated due to sickness, 1% of the poor are estimated to fall below the poverty line tending to their illness, and an estimated 65% of the poor in India get further into debt. To reduce out of pocket (OOP) expenditure for health care and lessen a considerable financial burden on the poor, a national health insurance scheme, Rashtriya Swasthya Bima Yojana (RSBY) was launched in 1st April 2008. **Objectives:** The present study was conducted to assessment of services rendered under the RSBY scheme with the aims & objectives, 1. To describe the socio-demographic characteristic and health problems of the patients who availed the benefits of RSBY in last one year; 2. To assess the medical and other support services rendered under RSBY scheme by government and private empanelled hospitals; 3. To assess the attitude of beneficiaries towards RSBY scheme in terms of satisfaction with the treatment provided. **Method:** Total 176 household interviewed from study district. A pretested semi structured questionnaire was used to interview a respondent from the family. The data entry was done using EPI INFO and data analysis was done using EPI INFO, Microsoft Office Excel 2007 and MedCalc. **Results:** 59.7% beneficiaries were coming from less than 10 km from the hospital. Medical and surgical causes were the major problems. 89.8% of beneficiaries were asked to get medicine from outside. 76.7 % beneficiaries were provided free food during stay at the hospital. 87.5% of the patients got discharged summary. 92.6% of the patients responded that finger Print Verification was done on Discharge. 76.1% beneficiaries were not told about the amount left in the card at the time of discharge. **Conclusion:** Majority of the patients in private hospital availed surgical treatment. Patients in private hospital were more satisfied with the services rendered in RSBY.

**Key Words :** Health Insurance, RSBY, Service Satisfaction, Utilization

### Introduction :

Poverty is a relative phenomenon and multi-faced wretched state of deprivation of basic minimum needs, facilities and services. There are different levels to its adverse influence on individual, family and community.<sup>[1]</sup>

Poor health not only leads to financial bankruptcy but also gives many sufferings to the affected individual and their family. Health is a fundamental human right and it is the responsibility of the governments, both at the central and states, to provide health care to all people in equal proportions. Total health care boosts economic growth, reduces poverty and lowers mortality rates. The saga of success of many countries lies in their special effort to provide the entire population with good health care facilities.<sup>[2]</sup>

A World Bank study, reports that approximately one-fourth of the Indian population fall below the poverty line due to hospitalization costs. It has also been estimated that OOP expenditure on health care might have raised the proportion of the population in poverty by 2%.<sup>[3]</sup>

An estimated 150 million have been reported as spending more than 40% of their income on their health needs, which could contribute to the vicious cycle of poverty perpetuating poverty.<sup>[4]</sup> India spends about 4.3% of its Gross Domestic Product (GDP) on healthcare. However, 72% of this money is paid by individual households through (OOP) payments at the time of illness, representing one of the highest proportions of OOP in the world.<sup>[5]</sup>

In India, the government acts as both a financer as well as a provider of health care.<sup>[6]</sup> In India, poverty is

propagated due to sickness, 1% of the poor are estimated to fall below the poverty line tending to their illness, and an estimated 65% of the poor in India get further into debt.<sup>[4]</sup> Evidence shows that in India about 6% of patients do not seek care for financial reasons.<sup>[7]</sup>

Announcement regarding Rashtriya Swasthya Bima Yojana (RSBY) was done by the former Prime Minister Manmohan Singh on August 15, 2007.<sup>[8]</sup> The RSBY was launched on 1<sup>st</sup> April 2008, explicitly to protect the poor from catastrophic hospital expenditure.<sup>[9]</sup> RSBY is India's first social security scheme that embraces a profit motive, and is a good example of public-private partnership in the social sector.<sup>[10]</sup>

All poor households in the national Below Poverty Line (BPL) are eligible to enroll in this scheme. RSBY is a voluntary private health insurance scheme, wherein a BPL family of (maximum) five people can be enrolled with Insurance Company by paying a token enrolment fee of INR 30 per family per year. Insurance companies enroll BPL families and provide them with a RSBY "smart card" that contains the biometric details of the enrolled family; the smart card is necessary for all transactions at the hospital. The premium for each family is paid by the government directly to the insurance company.<sup>[9]</sup>

This national health insurance scheme aims at providing health insurance to households living below poverty line (BPL) in order to protect them from major health shocks that involve hospitalization up to INR 30,000.<sup>[4]</sup>

Those BPL people are usually penniless and illiterate or semi-illiterate and many of them now are migrant workers. So RSBY beneficiaries' utilization of inpatient healthcare is cashless, paperless and highly portable. Despite so many advantages, it is very surprising that the enrolment rate and utilization of RSBY are still very low.<sup>[11]</sup>

As on date April 30 2014 number of active RSBY card holders were 37,191,843 in India and 7,163,935 hospitalized cases were documented under RSBY scheme all over India.<sup>[12]</sup> Total 1407 hospitalizations under RSBY scheme were documented during year 2013-14. The current study intended to assessment of services rendered under the scheme in Jamnagar

district and explores various factors that influence people's decision to join or the barriers to enrollment in the scheme.

### Method:

According to census 2011, population of the study district is 14, 07, 635 (Urban: 7, 29,270; Rural: 6, 78, 365). The sex ratio is 938:1000. <sup>[13]</sup> In study district total 86,059 BPL families are there among them 23,508 are RSBY card holders. There are total 11 RSBY empanelled hospital in study district. Among them 7 hospitals are government and 4 are private hospital. Total 1595 RSBY beneficiaries were hospitalized during April 2013 to March 2014. The present study was a cross sectional study conducted in urban and rural areas of the study district. The study was carried out from August 2014 to July 2015.

**Sample size:** To evaluate the services rendered under RSBY scheme, it was decided to study 10% of the beneficiaries who availed services in last one year from public as well as private health institutions. In study district total 1407 patients got benefit from government RSBY empanelled hospital and 188 patients got benefit from private RSBY empanelled hospital in last one year. So, 10 % of those patients i.e., 141 beneficiaries from government hospital and 19 from private hospitals was the desired sample size. After adding 10% non-respond rate, sample size came to be 155 and 21 patients from government and private hospitals respectively. So the total sample size was 176 patients.

**Sampling method and sample selection:** List of patients who were admitted in government or private hospitals during April 2013-March 2014 and got benefits of RSBY scheme was obtained from district RSBY programme office. Using random number table, required sample (i.e. 155 patients from government hospitals and 21 patients from private hospitals) was selected from the list.

**Ethical Clearance:** Ethical approval was taken before the commencement of the study from the ethical committee of the concerned institution.

**Method of data collection:** A pretested semi structured questionnaire was used to interview a respondent from the family. General demographic profile of enrolled family members, utilization of RSBY scheme and awareness regarding various

components of RSBY were recorded.

For evaluation of services provided by hospitals in RSBY scheme patients or attendants were interviewed using pretested semi structure questionnaire and their responses towards services they availed were recorded.

House to house visit of the selected beneficiaries or patients was done. The purpose of the study was explained and informed consent was obtained before starting the interview.

**Statistical analysis:** The data entry was done using

EPI INFO version 3.5.3 and data analysis was done using EPI INFO, Microsoft Office Excel 2007, SPSS version 21 and MedCalc.

### Results:

Table 1 show that there were 42.6% of hospitalized beneficiaries above the age of 49 years and only 5.7% of hospitalized beneficiaries between the ages of 20-29 years. Three fifth hospitalized beneficiaries were male and 40.9% were female. More than two third of hospitalized families belonged to SEBC category. More than three fifth beneficiaries were coming from the urban area.

**Table 1: Demographic characteristics of hospitalized beneficiaries**

Demographic characteristics	Government N=155	Private N=21	Total N=176
<b>Age group (in years)</b>			
<b>0 - 19</b>	26 (16.8%)	2 (9.5%)	28 (15.9%)
<b>20 - 29</b>	7 (4.5%)	3 (14.3%)	10 (5.7%)
<b>30 - 39</b>	20 (12.9%)	6 (28.6%)	26 (14.8%)
<b>40 - 49</b>	33 (21.3%)	4 (19.0%)	37 (21.0%)
<b>&gt;49</b>	69 (44.5%)	6 (28.6%)	75 (42.6%)
<b>Gender</b>			
<b>Male</b>	95 (61.3%)	9 (42.9%)	104 (59.1%)
<b>Female</b>	60 (38.7%)	12 (57.1%)	72 (40.9%)
<b>Social group</b>			
<b>Socially &amp; Educationally Backward Class (SEBC)</b>	107 (69.0%)	14 (66.7%)	121 (68.8%)
<b>Scheduled Caste (SC)</b>	11 (7.1%)	2 (9.5%)	13 (7.4%)
<b>Scheduled Tribe (ST)</b>	7 (4.5%)	2 (9.5%)	9 (5.1%)
<b>Other</b>	16 (10.3%)	1 (4.8%)	17 (9.7%)
<b>Don't know</b>	14 (9.0%)	2 (9.5%)	16 (9.1%)
<b>Locality</b>			
<b>Rural</b>	60 (38.7%)	5 (23.8%)	65 (36.9%)
<b>Urban</b>	95 (61.3%)	16 (76.2%)	111 (63.1%)

(For age group Mean = 44.86, SD = 19.48)

**Table 2: Distribution based on distance, health problem and condition of the patients**

Characteristics	Government N=155	Private N=21	Total N=176
<b>Distance (km)</b>			
<b>0 - 10</b>	86 (55.5%)	19 (90.4%)	105 (59.7%)
<b>11 - 20</b>	18 (11.6%)	1 (4.8%)	19 (10.8%)
<b>&gt;21</b>	51 (32.9%)	1 (4.8%)	52 (29.5%)
<b>Health Problem</b>			
<b>Medical</b>	51 (32.9%)	0 (0.0%)	51 (28.9%)
<b>Surgical</b>	46 (29.7%)	6 (28.6%)	52 (29.5%)
<b>Orthopedic</b>	38 (24.5%)	1 (4.8%)	39 (22.2%)
<b>Gynecological</b>	3 (1.9%)	3 (14.3%)	6 (3.4%)
<b>Ophthalmological</b>	8 (5.2%)	3 (14.3%)	11 (6.3%)
<b>ENT</b>	9 (5.8%)	8 (38.0%)	17 (9.7%)
<b>Condition of the Patient</b>			
<b>Able to walk Independent or with support</b>	109 (70.3%)	20 (95.2%)	129 (73.3%)
<b>Needed stretcher</b>	46 (29.7%)	1 (4.8%)	47 (26.7%)

(For distance Mean = 20.53, SD = 25.90)

Table 2 shows that in government hospital 55.5% beneficiaries were coming from less than 10 km distance as compared to 90.4% beneficiaries in private hospital. The reasons for the hospitalization varied from person to person. Medical (acute pharyngitis, chest pain, diabetes etc...) and surgical (abdominal pain, acute appendicitis, acute enteritis etc...) causes were the major problems i.e. 28.9% and 29.5% respectively followed by orthopedic problems (22.2%) for which patients under RSBY scheme sought the treatment. In government hospital 70.3% patients were able to walk by own or support and in private hospital 95.2% patients were able to walk by own or support. This difference is statistically significant. (P=0.031)

Table 3 reflects that among the studied beneficiaries, 94.9% stated that there was a help desk and this proportion was more in government hospitals. Transportation cost was reimbursed to only 68.2% of the patients. In government hospital

74.8% and in private hospitals 19% patients got travelling expenses. In private hospital 85.7% admitted through OPD as compared to 51.6% in government hospital.

As per above table-4, in private hospital 52.4% patients and in government hospital 23.9% patients were asked to get investigation done from outside during admission. This difference is statistically significant (p=0.006). Majority (i.e. 89.8%) of beneficiaries were asked to get medicine from outside. Among the government hospital 92.3% beneficiaries and among private hospital 71.4% beneficiaries were asked to get medicine from outside during hospital stay. This difference is statistically significant (p=0.003). In government hospital 85.2% beneficiaries and in private hospital 14.3% beneficiaries were provided food during stay at hospital. This difference is statistically significant (p<0.001).

**Table 3: Distribution based on services rendered before hospitalization**

Services on admission	Government N=155	Private N=21	Total N=176	$\chi^2$ Value	P-Value
Availability of Help Desk	149 (96.1%)	18 (85.7%)	167 (94.9%)	4.134	< 0.05
Reimbursement of transportation Cost	116 (74.8%)	4 (19.0%)	120 (68.2%)	24.026*	<0.001
Admitted through OPD	80 (51.6%)	18 (85.7%)	98 (55.7%)	7.388	0.007

\*Yates' chi-square

**Table 4: Distribution based on services rendered during hospitalization**

Services during hospitalization	Government N=155	Private N=21	Total N=176	$\chi^2$ Value	P-Value
Investigation done from outside	37 (23.9%)	11 (52.4%)	48 (27.3%)	7.579	0.006
Prescribed medicine from outside	143 (92.3%)	15 (71.4%)	158 (89.8%)	8.739	0.003
Food Provided	132 (85.2%)	3 (14.3%)	135 (76.7%)	48.102*	<0.001

\*Yates' chi-square

**Table 5: Distribution based on services rendered at the time of discharge**

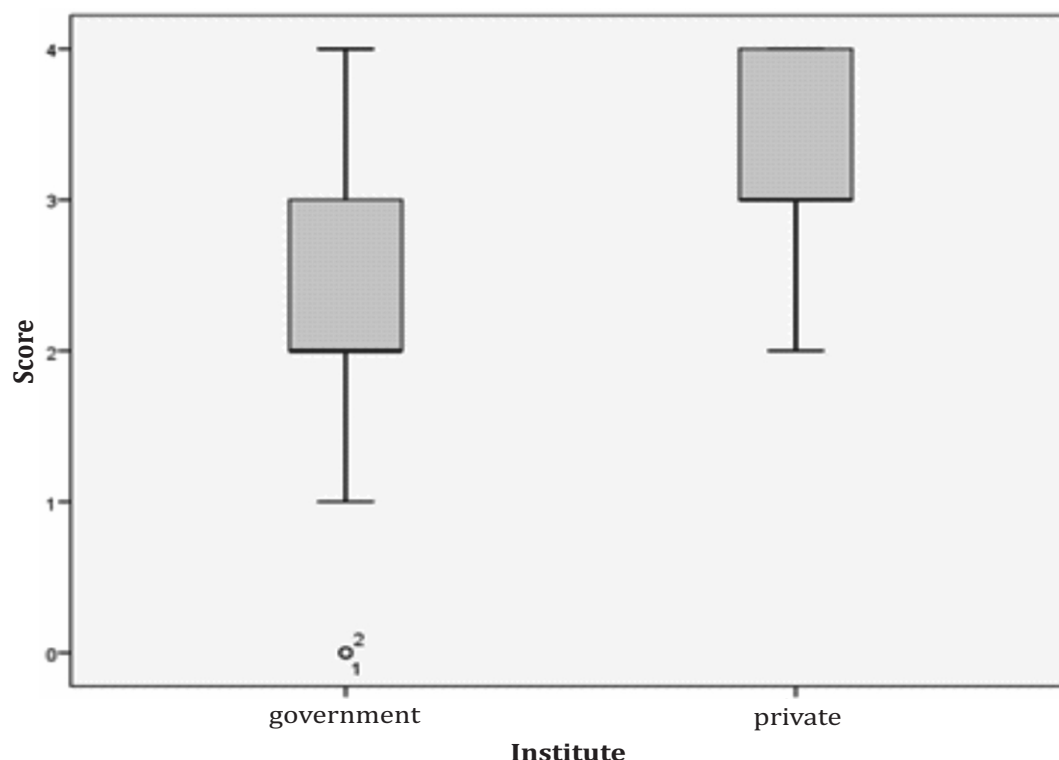
Services on discharge	Government N=155	Private N=21	Total N=176	$\chi^2$ Value	P-Value
Discharge summary provided	134 (86.5%)	20 (95.2%)	154 (87.5%)	1.298	0.2546
Fingerprint verification done	143 (92.3%)	20 (95.2%)	163 (92.6%)	0.239	0.6251
Whose finger print (patient)	54 (37.8%)	18 (90.0%)	72 (44.2%)	19.296	< 0.0001
Receiving smart card back	151 (97.4%)	20 (95.2%)	171 (97.2%)	0.317	0.5734
Whether informed about amount left	32(20.6%)	10(47.6%)	42(23.9%)	7.364	0.0067

Table-5 shows that majority (i.e. 87.5%) of the patients got discharge summary. This proportion was found to be high for private hospital as compared to government hospital but difference is not significant. Majority (i.e. 92.6%) of the patients responded that finger Print Verification was done on Discharge. This proportion was almost same for government and private hospital beneficiaries. On asking, whose fingerprint was taken on discharge, Patients' fingerprint verified in 90.0% of private and 37.8%

government hospital beneficiaries. This difference is statistically significant ( $p < 0.001$ ). Almost 97.2% of beneficiaries received the Smart Card Back on the Day of Discharge. This proportion was found to be same for government hospital (97.4%) and private hospital (95.2%). In government hospital 79.4% of beneficiaries and in private hospital 52.4% of beneficiaries were not told about the amount left in the card at the time of discharge. This difference is statistical significant ( $p = 0.006$ ).



Figure 1: patients' satisfaction for RSBY services during hospitalization



Box plot chart in the figure-1 shows satisfaction score of the patients for services rendered under RSBY scheme at government and private hospitals. Median satisfaction score of the patients who availed services at government hospital was 2 (IQR 2-3) as compared to median score of 3 (IQR 3-4) for private hospital patients. This difference was statistically significant. (Mann-Witney U test was applied since score did not follow normal distribution)  $U=723.5$ ,  $p>0.001$ .

#### Discussion:

This study found that 42.6% of hospitalized beneficiaries above the age of 49 years while "RSBY-CHIS Evaluation Survey" <sup>[1]</sup> and Jaimin Patel et al (2013) <sup>[14]</sup> in Ahmedabad found same.

Our study showed that Medical and surgical causes were the major problems i.e. 28.9% and 29.5% respectively which is more or less same as study "RSBY-CHIS Evaluation Survey" <sup>[1]</sup> and "Evaluation of implementation of Rashtriya Swasthya Bima Yojana in select districts of Bihar, Uttarakhand and Karnataka". <sup>[15]</sup> In the study "RSBY-CHIS Evaluation Survey" it was found that 58.3% stated that they were

able to walk without the help of others at the time of admission, 25.9% of patients on the other required stretcher or wheelchair. The rest i.e., 15.7% were able to walk with the support of others. <sup>[1]</sup> almost similar picture seen in our study.

In the study, "RSBY-CHIS Evaluation Survey" 88.9% of the beneficiaries affirmed the existence of RSBY help desk at the hospitals and 8.3% beneficiaries were unaware about the RSBY helpdesk while 2.8% beneficiaries reported that there was no RSBY helpdesk in the hospital. Almost similar trend was seen in our study. <sup>[1]</sup> P.P. Mini (2013) in his study found that Even though there is a provision of traveling allowance of Rs.100 in the scheme, only 19.3% of the beneficiaries received it, whereas about 80.7% beneficiaries denied with it. <sup>[2]</sup> In our study similar trend seen in private hospital but in government hospital 74.8% of the beneficiaries received it. In the study "RSBY-CHIS Evaluation Survey" it was found that Majority (73.1%) of the admissions were reported to be through the Out Patient Department. 24.1% were admitted through Emergency. The remaining 2.8% were through referrals. <sup>[1]</sup>

In the study “RSBY-CHIS Evaluation Survey”, it was found that 75% of patients reported that they were not asked to do any diagnostic tests from outside.<sup>[1]</sup> In the study, “RSBY-CHIS Evaluation Survey” 75.9% was not asked to purchase medicines from outside. Only 24.1% were asked to purchase from outside.<sup>[1]</sup> In the study “RSBY-CHIS Evaluation Survey” it was found that 70.4% patients, the hospitals provided food for the patients during their stay at the hospitals.<sup>[1]</sup> More or less similar finding in government hospital but in private hospital only 14.3% of the beneficiaries received it. This indicates many benefits of the scheme are not given to the beneficiaries in private hospital.

In our study found that 87.5% of the beneficiaries were aware of about receiving discharge summary and 92.6% of the beneficiaries were aware of about finger print verification during discharge. This is differ from P.P. Mini (2013) study.<sup>[2]</sup> This indicate good implementation of the scheme in our study area. In the study “RSBY-CHIS Evaluation Survey” it was found that 66.7% patients stated that it was their finger print that was verified at the time of discharge. For 33.3% of patients, the family member did it.<sup>[1]</sup> In our study found that 97.2% beneficiaries received the smart card on the same day of discharge. Almost similar finding in P.P. Mini (2013) in his study.<sup>[2]</sup> P.P. Mini (2013) in his study found that about 52.6% of the beneficiaries were aware about money left in the smart card at the time of discharge.<sup>[2]</sup> In the study “RSBY-CHIS Evaluation Survey” it was found that 64.8% were not informed about money left in the card. Only 35.2% affirmed about the receipt of information regarding the money left in the card.<sup>[1]</sup>

## Conclusion:

Majority of the patients in private hospital availed surgical treatment and identifying the help desk and admission procedures were easy in private hospital but very few patients reported reimbursement of transportation cost. During admission in private hospitals, more patients reported outside investigations while outside drugs were prescribed more to patients in government hospitals. On discharge all, the services were better in private hospitals. Patients in private hospital were more satisfied with the services rendered in RSBY.

## Declaration:

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Conflict of Interest: Nil

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