

# Trends in Awareness and Utilization of Inpatient Healthcare Services under Government Sponsored Health Insurance Schemes: Insights from Select Cities of Maharashtra

Dr. Neha Ahire<sup>1\*</sup>, Dr. Parag Rishipathak<sup>2</sup>

<sup>1</sup>Assistant Professor, SIHS, SIU Pune

<sup>2</sup>Professor & Director, SCHS, SIU Pune

## ABSTRACT

**Introduction:** India's National Health Policy 2018 (NHP-2018) has its goal fully aligned with the concept of Universal health coverage. The Ayushman Bharat Program announced in the Union budget 2018-19 of the Government of India, aims to carry NHP-2018 proposals forward. Along with Ayushman Bharat there are other state run health insurance schemes as well which are catering to the needs of the people. Government sponsored health insurance schemes have received an unprecedented public, political and media attention. This article studies the trends in utilization of healthcare services under government sponsored health insurance schemes in select cities of Maharashtra.

**Aim & Objectives:** To study the trends in the awareness and utilization of inpatient healthcare Services under Government Sponsored Health insurance Schemes in Select Cities of Maharashtra namely Pune, Mumbai and Nagpur

**Findings:** Utilization trends in three select cities of Maharashtra have been studied. The sources of awareness regarding such schemes were hospitals. The study also highlights utilization specialty health care services amongst all age groups in selected cities.

**Conclusion:** Utilization trends suggest the need of government sponsored health insurance schemes. The schemes have been found to be beneficial for all the age group

**Corresponding Author:** nehaahire@sihspune.org

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## INTRODUCTION

Indian health system has shown remarkable achievements since independence in various key health indicators. (Golechha M. (2015), Planning commission 2011). However, much remains desired with major weaknesses in healthcare organization, financing, and provision of health services. O'Connell, T., Rasanathan, K., & Chopra, M. (2014). Health care financing is one such area where India needs to focus upon. Demographic (ageing of population), epidemiological (rising spectrum of cost-intensive non-communicable diseases), and social (increased awareness and expectations of consumers of healthcare for technologically advanced care) transitions in health has escalated the healthcare treatment costs manifold. Studies have shown evidences of indebtedness due to hospitalization: Large informal sector and asymmetry of information between insurer and beneficiary pose challenge for using social and private health insurance (PHI), respectively. In such scenario, there is a clear need to reform healthcare financing & to strengthen health insurance system to achieve Universal health coverage. . (Deepak Kumar Behara, 2020)

India's expenditure on health is still low and stands close to 1.29% of the GDP. This includes share of the central and the state government. Although it is higher than before but much less as compared to the developing countries. The cost of treatment has been on the rising side and has led to the severe inequity in healthcare. (Deepak Kumar Behara, 2020)

The total per capita government spending on healthcare has nearly doubled from ₹1,008 per person in FY15 to ₹1,944 in FY20 but is still low. The total expenditure by the Centre and states for FY20 was ₹2.6 trillion, or 1.29% of GDP, including establishment expenditure comprising salaries, gross budgetary support to various institutions and hospitals and transfers to states under centrally sponsored schemes

## KEYWORDS:

Ayushman Bharat, Government Sponsored health Insurance schemes, Universal health coverage .

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such as Ayushman Bharat. Of the total public expenditure, the Centre’s share is 25%. Over the last five years, the total public expenditure on health has risen at 15% CAGR, but much of this is spent on the salary costs. The figures shows that the actual spent of health is less and much needs to be done in healthcare financing.

India’s total healthcare spending (out-of-pocket and public), at 3.6% of GDP, as per OECD, is way lower than that of other countries. The average for OECD countries in 2018 was 8.8% of GDP. Developed nations—the US (16.9%), Germany (11.2%), France (11.2%) and Japan (10.9%).(Kundu, 2009)

The challenges to Indian healthcare financing are diverse and include

- increasing health care costs
- high financial burden on poor eroding their incomes
- increasing burden of new diseases and health risks

neglect of preventive and primary care and public health functions due to underfunding of the government health care. (Bhat et al, 2006).

Considering the above scenario exploring health-financing options becomes critical. Health Insurance is considered one of the financing mechanisms to overcome some of the problems of our system.

Ayushman Bharat National Health Protection Mission- The National Health Protection Scheme (now Ayushman Bharat National Health Protection Mission) provides for financial protection of up to Rs 5 lakh per family per year to 10.74 crore families (or 50 crore population) for secondary and tertiary hospitalization. The cost is borne by the government (Centre and States). “Further, the National Health Policy 2017 envisages raising government health spending to 2.5 per cent of the GDP

by 2025 in a time-bound manner. It also envisages increasing state sector health spending to more than 8 per cent of their budget by 2020,” he said in his reply tabled in the House. (Ahire N & Rishipathak P, 2018). The current study aims to understand the trends in awareness and utilization of healthcare under Government Sponsored Health Insurance Schemes by capturing Insights from Select Cities of Maharashtra.

## AIM & OBJECTIVES

The study aims to understand the trends in the awareness and utilization of Healthcare Services under Government Sponsored Health Insurance Schemes in Select Cities of Maharashtra.

## RESEARCH METHODOLOGY

Government sponsored health insurance /health schemes play a significant role in penetration of health insurance. Questionnaire was administered to assess the determinants of the Government insurance schemes. The data was collected from the beneficiaries of PMJAY and MJPJY schemes, which are the largest health schemes in the state of Maharashtra. The questionnaire mapped socio-demographic details of the study participants, factors affecting penetration of health insurance of government health insurance schemes and utilization trends.

**Sample Size:** Government sponsored health insurance schemes

City	Sample size
Pune	220
Mumbai	232
Nagpur	200

## FINDINGS & DISCUSSION

### Findings from the survey of beneficiaries of Government Health Insurance/ health Schemes

**Table 1:** General Characteristics of the respondents

Variables	Mumbai		Nagpur		Pune	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>Age</b>						
Below 25	24	10.3	25	12.5	15	6.8
26-40	43	18.5	52	26.0	28	12.7
41-60	108	46.6	85	42.5	99	45.0
60 and above	57	24.6	38	19.0	78	35.5
Total	232	100.0	200	100.0	220	100.0
<b>Gender</b>						
Male	144	62.1	126	63.0	119	54.1
Female	88	37.9	74	37.0	101	45.9
Total	232	100.0	200	100.0	220	100.0
<b>Source of awareness</b>						
Direct hospitals	199	85.8	186	93.0	202	91.8
PHC/CHC	26	11.2	11	5.5	14	6.4
Others	7	3.0	3	1.5	4	1.8
Total	232	100.0	200	100.0	220	100.0
<b>Occupation</b>						
Farmer	8	3.4	20	10.0	17	7.7
Non-Farmer	224	96.6	180	90.0	203	92.3
Total	232	100.0	200	100.0	220	100.0

Variables	Mumbai		Nagpur		Pune	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>Claim Paid Amount</b>						
Rs. 0- 50000	177	83.5	149	83.7	174	86.1
Rs. 50000 - 1 Lakh	31	14.6	26	14.6	27	13.4
1 Lakh and above	4	1.9	3	1.7	1	0.5
Total	212	100.0	178	100.0	202	100.0
<b>CARD TYPE</b>						
Orange	224	96.6	157	78.5	185	84.1
Yellow	3	1.3	41	20.5	35	15.9
Others	5	2.2	2	1.0	0	0.0
Total	232	100.0	200	100.0	220	100.0
<b>Department</b>						
Cardiac Care	55	23.7	26	13.0	46	20.9
General Surgery & Allied	15	6.5	19	9.5	27	12.3
Medical / Surgical Oncology	23	9.9	84	42.0	76	34.5
Nephrology	114	49.1	14	7.0	22	10.0
Orthopedic Surgery and Procedures	15	6.5	28	14.0	13	5.9
Others	10	4.3	29	14.5	36	16.4
Total	232	100.0	200	100.0	220	100.0

**Table 2:** Sources of awareness through age and its statistical significance

Age	Hospital	PHC/ CHC	Others	Total
	MUMBAI			P value- 0.2
0-25	23(95.8)	0(0)	1(4.2)	24(100)
26-40	39(90.7)	2(4.7)	2(4.7)	43(100)
41-60	89(82.4)	16(14.8)	3(2.8)	108(100)
Above 60	48(84.2)	8(14)	1(1.8)	57(100)
Total	199(85.8)	26(11.2)	7(3)	232(100)
Nagpur				P value- 0.8
0-25	22(88)	2(8)	1(4)	25(100)
26-40	49(94.2)	3(5.8)	0(0)	52(100)
41-60	82(96.5)	3(3.5)	0(0)	85(100)
Above 60	33(86.8)	3(7.9)	2(5.3)	38(100)
Total	186(93)	11(5.5)	3(1.5)	200(100)
Pune				P value- 0.28
0-25	15(100)	0(0)	0(0)	15(100)
26-40	25(89.3)	2(7.1)	1(3.6)	28(100)
41-60	92(92.9)	6(6.1)	1(1)	99(100)
Above 60	70(89.7)	6(7.7)	2(2.6)	78(100)
Total	202(91.8)	14(6.4)	4(1.8)	220(100)

Table 1 summarizes the socioeconomic determinants of the beneficiaries, claim amount paid and sources of awareness of the health insurance schemes. In all the three cities maximum beneficiaries were in the age group of 40-60. Males were seen to utilize the benefits more as compared to females.

Hospitals are the source of awareness in all the three cities where maximum beneficiaries were made aware about such schemes through hospitals. PHC and HC were the next sources of awareness for the beneficiaries.

In the study among the beneficiary’s maximum number of claims was paid was up to Rs.50, 000 (Table 2).

For analysis purposes, the treatment availed was categorized into cardiac care, general surgery and allied, medical and surgical oncology, nephrology, orthopedic surgery and procedures.

To check the relation between age and awareness cross tabulation was done. It is evident that the sources of awareness is not identified through various age groups and same source is being preferred by all. The source of awareness was primarily direct information through the hospitals. 85.8% of the beneficiaries of Mumbai reported hospitals as their major sources of awareness when they visited for consultation. The response of hospital as major source was 93% and 91% in Nagpur and Pune. This also highlights the fact that hospitals are the major sources of information of such health schemes and it is advisable to include as many as hospitals as possible in the schemes. Hospitals not only serves as source of information for the general population but also beneficial for the government health schemes from treatment point of view. Government should take initiatives in empaneling as many as hospitals as possible in such schemes. PHCs and CHCs were the next sources of awareness. Thus, it is important for the staff of the PHC to get awareness about the such schemes. Remaining sources include influence of friends and relatives and word of mouth (Table 3).

To check the relation between gender and awareness Cross tabulation was done. It is evident that the sources of

awareness are not identified through various gender and same source is responsible for awareness. The source of awareness was primarily direct information through the hospitals. In Mumbai Hospitals as the sources of awareness was reported by 86% of males and 85.2 % of females. Similarly, in Nagpur hospitals as sources of awareness was reported by 91.3% males and 95.5% females. In Pune too, hospitals as primary source of information was reported by 91.6% and 93% females (Table 4).

As the government health insurance schemes are for the weaker section of the society the occupation was categorized as Farmers and Non-Farmers, non farmers include any eligible person having income up to 1 Lakhs. Cross tabulation was done to study the sources of awareness as per the occupation. In Mumbai the sources of awareness for 100% farmers were direct hospitals visit. Same was the response for the 85.3% of the non-farmers. In Nagpur 95% of the farmers and 92% of the non-farmers stated hospitals as the source of awareness about the schemes. In Pune too the topmost sources of direct visit to hospitals were stated by 82.4% of farmers and 92.6% of the non-farmers. In case of farmers, PHC and CHC as the source of awareness in Nagpur and Pune was 1% and 2 %. This states a need to educate the PHCs and CHCs to regarding the government health insurance and health schemes and also the empaneled hospitals where they can refer the patients.

The claim paid as per the occupation was also analyzed. For analysis purposes the claim paid was categorized as 1-50, 000,

**Table 3:** Sources of awareness according to gender

	Hospital	PHC/ CHC	Others	Total
<i>Gender</i>	<i>Mumbai</i>			<i>P value = 0.96</i>
Male	124(86.1)	16(11.1)	4(2.8)	144(100)
Female	75(85.2)	10(11.4)	3(3.4)	88(100)
Total	199(85.8)	26(11.2)	7(3)	232(100)
	<i>Nagpur</i>			<i>P value =0.40</i>
Male	115(91.3)	9(7.1)	2(1.6)	126(100)
Female	71(95.9)	2(2.7)	1(1.4)	74(100)
Total	186(93)	11(5.5)	3(1.5)	200(100)
	<i>Pune</i>			<i>P-value = 0.96</i>
Male	109(91.6)	8(6.7)	2(1.7)	119(100)
Female	93(92.1)	6(5.9)	2(2)	101(100)
Total	202(91.8)	14(6.4)	4(1.8)	220(100)

**Table 4:** Sources of awareness according to Occupation

	Hospital	PHC/ CHC	Others	Total
<i>Occupation</i>	<i>Mumbai</i>			<i>P value = 0.503</i>
Farmer	8(100)	0(0)	0(0)	8(100)
Non Farmer	191(85.3)	26(11.6)	7(3.1)	224(100)
Total	199(85.8)	26(11.2)	7(3)	232(100)
	<i>Nagpur</i>			<i>P value = 0.83</i>
Farmer	19(95)	1(5)	0(0)	20(100)
Non Farmer	167(92.8)	10(5.6)	3(1.7)	180(100)
Total	186(93)	11(5.5)	3(1.5)	200(100)
	<i>Pune</i>			<i>P value = 0.25</i>
Farmer	14(82.4)	2(11.8)	1(5.9)	17(100)
Non Farmer	188(92.6)	12(5.9)	3(1.5)	203(100)
Total	202(91.8)	14(6.4)	4(1.8)	220(100)

50000-1,00,000 and 1000000- 1,50,000. For Maximum number of beneficiaries, in Mumbai in the farmers category claim paid up to 50,000 was seen in 62% of the beneficiaries. 25% beneficiaries availed benefits up to 50,000 to 1 lakh. Among the non-farmer category again 79% availed benefits the range of 1- 50,000. In total, 78.7% respondents availed benefits in the range of Rs. 1- 50,000. Only 1.8% of the beneficiaries claim amount was in the range of 1 L to 1.5 L.

In Nagpur in the farmers category claim paid up to 50,000 was seen in 100% of the beneficiaries. 26% beneficiaries availed benefits up to 50,000 to 1 lakh. Among the non-farmer category again 78% availed benefits the range of 1- 50,000. In total, 80% respondents availed benefits in the range of Rs. 1- 50,000. In Nagpur too, claim amount in the range of 1 L to 1.5 L. was seen in 1.8% of the beneficiaries.

In Pune too, among the farmers category claim paid up to 50,000 was seen in 52.9% of the beneficiaries. 29.4% beneficiaries availed benefits up to 50,000 to 1 lakh. Among the non-farmer category again 83.8 % availed benefits the range of 1- 50,000. In total, 81% respondents availed benefits in the range of Rs.

1- 50,000. In Pune, claim amount in the range of 1 L to 1.5 L. was seen in 5 % of the beneficiaries (Table 5).

Studies from the past have shown that utilization of hospitalization and health insurance is seen more in males than in females. To analyze the utilization of care and claims paid cross tabulation was done. Amongst males in Mumbai, 74.8 % claim paid amount was in the range 1-50K.Claim paid in the range of 1L to 1.5L was seen in 2.2% of the males and 1.2 % of the females. The data also shows more utilization of care by males.

Amongst males in Nagpur, 85.5 % claim paid amount was in the range 1-50K.Claim paid in the range of 1L to 1.5L was seen in 1% of the males and 3 % of the females.

In Pune, for 77.4% of the males the claim paid amount was Rs 1-50,000. Claim amount of 50,000 to 1L was paid in 14.8% of the males and 1-1.5L was paid in 0.9% of the males. Amongst females in 85.9% of the cases claim paid was up to 50,000. Claim paid in the range of 1-1.5L was seen in 0.5% of the beneficiaries (Table 6).

**Table 5:** Claims paid according to Gender

		Claim Paid Amount				
		0	1-50K	50K -1L	1L-1.5L	Total
<i>Gender</i>	<i>Mumbai</i>	<i>P value = 0.12</i>				
Male		7(5)	104(74.8)	25(18)	3(2.2)	139(100)
Female		6(7)	73(84.9)	6(7)	1(1.2)	86(100)
Total		13(5.8)	177(78.7)	31(13.8)	4(1.8)	225(100)
	<i>Nagpur</i>	<i>P value = 0.62</i>				
Male		7(5.9)	95(80.5)	15(12.7)	1(0.8)	118(100)
Female		0(0)	54(80.6)	11(16.4)	2(3)	67(100)
Total		7(3.8)	149(80.5)	26(14.1)	3(1.6)	185(100)
	<i>Pune</i>	<i>P value= 0.32</i>				
Male		8(7)	89(77.4)	17(14.8)	1(0.9)	115(100)
Female		4(4)	85(85.9)	10(10.1)	0(0)	99(100)
Total		12(5.6)	174(81.3)	27(12.6)	1(0.5)	214(100)

**Table 6:** Benefits availed according to age in three cities

<i>Department</i>	<i>Age</i>				<i>Total</i>
	0-25	25-40	40-60	Above 60	
	<i>Mumbai</i>				
Cardiac Care	1(1.8)	4(7.3)	28(50.9)	22(40)	55(100)
General Surgery & Allied	3(20)	3(20)	4(26.7)	5(33.3)	15(100)
Medical / Surgical Oncology	4(17.4)	6(26.1)	9(39.1)	4(17.4)	23(100)
Nephrology	9(7.9)	22(19.3)	59(51.8)	24(21.1)	114(100)
Orthopedic Surgery and Procedures	3(20)	5(33.3)	6(40)	1(6.7)	15(100)
Others	4(40)	3(30)	2(20)	1(10)	10(100)
Total	24(10.3)	43(18.5)	108(46.6)	57(24.6)	232(100)
	<i>Nagpur</i>				
Cardiac Care	2(7.7)	6(23.1)	11(42.3)	7(26.9)	26(100)
General Surgery & Allied	1(5.3)	7(36.8)	8(42.1)	3(15.8)	19(100)
Medical / Surgical Oncology	2(2.4)	21(25)	46(54.8)	15(17.9)	84(100)
Nephrology	1(7.1)	2(14.3)	9(64.3)	2(14.3)	14(100)
Orthopedic Surgery and Procedures	7(25)	10(35.7)	4(14.3)	7(25)	28(100)

	Age				
	0-25	25-40	40-60	Above 60	Total
Others	12(41.4)	6(20.7)	7(24.1)	4(13.8)	29(100)
Total	25(12.5)	52(26)	85(42.5)	38(19)	200(100)
Pune					
Cardiac Care	1(2.2)	1(2.2)	23(50)	21(45.7)	46(100)
General Surgery & Allied	1(3.7)	6(22.2)	12(44.4)	8(29.6)	27(100)
Medical / Surgical Oncology	1(1.3)	7(9.2)	39(51.3)	29(38.2)	76(100)
Nephrology	2(9.1)	5(22.7)	9(40.9)	6(27.3)	22(100)
Orthopedic Surgery and Procedures	3(23.1)	1(7.7)	6(46.2)	3(23.1)	13(100)
Others	7(19.4)	8(22.2)	10(27.8)	11(30.6)	36(100)
Total	15(6.8)	28(12.7)	99(45)	78(35.5)	220(100)

Table 6 shows utilization of care according to the different specialties was analyzed. The treatment categories were identified and utilization of care was studied accordingly. In Mumbai majority of the cases in the age group of 0 -25 belonged to general surgery and allied disciplines.

In the age group 40-60 and above 60, 50% beneficiari es availed cardiac care.

## CONCLUSION

Government sponsored health insurance schemes have given the current policy directions for universal health care, publicly financed health insurance schemes are likely to stay. Findings from the responses of beneficiaries of government health insurance schemes suggest that Hospitals are the major sources of awareness regarding such schemes. This was followed by PHC and CHCs. These schemes have been found to be beneficial for the underprivileged sector of the society the data shows maximum respondents availed the benefits between 50, 000 to 1 Lakhs. Such schemes are essential to improve penetration of health insurance and thus to achieve universal health coverage. Hospitals not only serve as the treatment facility but also serve as source of awareness of government health insurance schemes, which is an important consideration. Hence private hospitals should be encouraged to take get empaneled in such schemes. Public financed health insurance schemes are a major step towards universal health coverage.

**Ethical approval:** IEC of Symbiosis International ( Deemed University)

**Informed Consent:** Informed consent was taken from all participants

## Authorship Contributions

**Neha Ahire:** Conception and design of the work, Data collection, Data analysis and interpretation, drafting the article, Critical revision of the article.

**Parag Rishipathak-** Conception and design of the work, Data analysis and interpretation Critical revision of the article.

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