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Oral health utilization and awareness of Ayushman Bharat (PMJAY) health insurance scheme in Bangalore

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ABSTRACT

Background: Oral health has a significant impact on quality of life of an individual but often an overlooked component of overall health. Oral diseases are emerging as a major public health concern in India and Ayushman Bharat Yojana focuses to help enhance oral health care of the entire nation. We aimed to assess the awareness and utilization of dental services under Ayushman Bharat health scheme among outpatients in Bangalore hospitals.

Methods: A mixed method comprising case analysis and cross sectional observation was carried out. The annual reports data of Ayushman Bharat scheme in Karnataka was obtained for the case analysis. A cross sectional study was carried out among 150 adults in five Bangalore hospitals and data was collected using self-administered questionnaire. Descriptive statistical analysis was done using SPSS 24.

Results: The study showed that 65.7% of the participants were unaware of Ayushman Bharat health insurance scheme. 25% of the participants were the beneficiaries of this scheme. Only 6% of the study participants availed general treatment under Ayushman Bharat and the treatment availed were for heart surgeries, labour and child birth, tuberculosis and cancer treatments. 12.5% of our participants were aware about dental coverage included in Ayushman Bharat insurance scheme and only 1 participant availed jaw surgery after road traffic accident under this scheme.

Conclusions: This study showed there is high Out-Of-Pocket Payments (OOP) spending and lack of knowledge regarding dental coverage under Ayushman Bharat scheme.

Keywords: Ayushman Bharat, Government health insurance, Dental insurance, Oral health, PMJAY, Universal health coverage

INTRODUCTION

Dental health in India is among the lowest priorities where most of the money is spent on survival and living. Oral health is an important component of overall health, affecting not only the individual but also the health system and economy as a whole. The consequences of widespread poor oral health can be seen at the individual, population, and health system levels, as caries and periodontal diseases deteriorate individual health and well-being, reduce economic productivity, and act as a significant risk factor for various systemic health diseases. In reality, Indian public spending on oral health is comparatively quite negligible when compared to the rest of the world whereas its proportion of private spending on dental health is one of the highest. In India, delivery of oral care is mainly by private practitioners and dental teaching institutions leading to unequal distribution thereby depriving the adequate utilization. There is also no distinct budget allocation for oral health. Therefore, the need of the hour is to transform the public health system into an

accountable, accessible and affordable system of delivering quality dental services. It is also acknowledged that more than 75% of the population in our country go to the private sector, quacks and others. Unlike most western countries, exclusive dental insurance plans are not common in India.

In 2018, the Government of India has launched an ambitious health-care scheme known as "Ayushman Bharat" (long live India), widely projected to be a progressive step toward Universal health coverage (UHC) in India. This scheme has two components: Pradhan Mantri Jan Arogva Yojana (PMJAY) and Health and Wellness Centres (HWCs). The PMJAY is a publicly financed health scheme for the socioeconomically underprivileged rural household and selected occupational category of the urban population. It targets to cover 10 crore households and approximately 50 crore people of the country, which roughly accounts for 40% of the total population. The scheme anticipates in reducing OOPE and catastrophic expenditure on health care through participation of private sector in addition to the existing network of public hospitals. The health benefits included are cashless treatment up to 500,000 rupees per family per year on a family floater basis with around 1350 medical and surgical procedures covering all secondary and most of the tertiary care procedures.³

Basic oral health care is introduced as one of the elements of this scheme delivered through HWCs to expand the availability of preventive, promotive, curative and rehabilitative aspects of dental health including referral to appropriate health facilities. To enlist the oral health coverage under PMJAY scheme, care at community level and at HWCs is provided by creating awareness about ill effects of tobacco, oral hygiene education, screening for gingivitis, periodontitis, malocclusion, dental caries, dental fluorosis and oral cancers with referral, tobacco counselling at cessation centres. At referral sites, diagnosis and management of oral cancer, management of malocclusion, trauma cases, tooth abscess, dental caries, surgical and prosthetic care with hospitalization cover is included under this scheme.⁴

The implementation of the Rashtriya Swasthya Bima Yojana (RSBY) in 2008 and other health insurance schemes in India has generated a huge literature. Though there are studies showing the positive impact of RSBY in improving the poor's access to inpatient care and protecting them from financial catastrophe, a large number of studies have shown the scheme's negative side. Given the assessment of RSBY and other publicly initiated insurance schemes for the poor being not very effective in decreasing the out-of-pocket expenditure of the concerned patients, the decision of the government to scale it up and go for a much expanded health insurance scheme needs to be analysed in detail. In this regard, the present study was undertaken with the following objective to assess awareness and utilization of dental services under Ayushman Bharat health scheme among outpatients in Bangalore city hospitals terms of proportions covered at each step such as awareness, enrolment, having card, and utilization.

METHODS

A mixed method comprising case analysis and cross sectional observation was carried out for a period of two months from August 2019 to September 2019 to know the awareness and utilization of dental services under Ayushman Bharat scheme.

Case Analysis: The annual reports of Ayushman Bharat scheme in Karnataka was obtained from the official website to know the number of beneficiaries, funds allotted and oral health provisions under the scheme.

Cross Sectional Study: A self-administered questionnaire based study was conducted on 150 adults in the Bangalore hospitals out-patient department. Convenience sampling method was used to select the hospitals in Bangalore. 5 hospitals were chosen conveniently for the study out of which 4 were from Bangalore City and 1 from Bangalore Rural. 30 participants from each hospital were conveniently selected making a sample size of 150 participants. List of empanelled hospitals that were selected for the study are Victoria Hospital, Government Dental College & Hospital, M.S. Ramaiah Hospital. Bowring Hospital, Devanahalli Taluk Hospital. Individuals both males and females above 25 years of age who visited the OPD during the study duration and individuals who gave consent for participation were included for the study. Individuals with systemic conditions and terminal illness were excluded. Furthermore, physically challenged and mentally compromised elderlies were excluded. Ethical approval was obtained from the Institutional Ethical Committee, M.R. Ambedkar Dental College and Hospital. The written informed consent was obtained from the participants after explaining the objectives and methodology of the study. The subjects were informed that their participation would be entirely voluntarily and they can withdraw from the study at any stage. The participants were assured that their details would be kept confidential.

Collection of data

The questionnaire was prepared and validated for its content by a panel of five experts which included staff from the Department of Public Health Dentistry. Data collection was done using self-administered questionnaire which was bilingual both in English and Kannada. The questionnaire consisted of Section A (Socio demographics details) & Section B (12 questions related to Awareness and Utilization of health scheme). The questionnaire was developed through a back-translation and reconciliation method, designed to be self-administered, but trained interviewers were available for anyone who needed assistance. It took respondents about 20 minutes to complete the questionnaire.

Statistical analysis

Data obtained was compiled systemically in Microsoft Excel 2016 spreadsheet and a master table was prepared. The data set was subdivided and distributed meaningfully. The data was proof read, and later presented in the form of graphs and tables. Descriptive Statistical analyses were performed using a personal computer with Statistical package for social sciences software (SPSS version 26).

RESULTS

In this present study, the annual reports on Ayushman Bharat website provided information regarding the total number of eligible families, the total number of public and private sector empanelled hospitals, the total number of Ecards generated for the scheme beneficiaries, the preauthorizations raised and claims submitted under Ayushman Bharat Health Insurance Scheme in the state of Karnataka. This scheme is implemented in Karnataka on Trust model basis and around 52,90,927 from state scheme are eligible under this scheme. There are around 405 public hospitals and 371 private hospitals, 11 medical colleges and 17 NABH accredited hospitals which are empanelled under Ayushman Bharat scheme in Karnataka. Around 97,82,697 were generated in the year 2019 in Karnataka and 1,15,284 claims registered in the year 2019 in Karnataka. (Table 1)

Table 1: The annual report of Ayushman Bharat scheme in Karnataka (2019). (Source – Ayushman Bharat PMJAY official website).

Mode of Implementation of the scheme in			
Karnataka – Trust model			
PM - JAY eligible families	62,09,073		
State Scheme eligible families	52,90,927		
Empaneled Hospitals under Ayushman Bharat in			
Karnataka			
Public Hospitals Empaneled	405		
Private Hospitals Empaneled	371		
Medical Colleges	11		
NABH fully accredited hospitals	17		
Beneficiary Identification	Till 2019		
E-cards generated	97,82,697		
Pre-Auths Raised	2,61,435		
Pre-Auths in amount	585,73,69,592		
Claims			
No of claims submitted	1,15,284		
Claims submitted (INR)	283,60,50,430		

In our cross sectional study, out of the 150 respondents, 89 (59.3%) were males and 61(40.6%) were females. The mean age of head of the family (HOF) in the study group were 43 ± 12 years. Most of them (41.3%) belonged to Hindu by religion and majority of family heads (HOF) were males (88%). The family income of the participants ranged between Rs.1800 – Rs.38000 and 91.3% lived in pukka houses. Education of the Head of the families was

considerably low with majority (36.6%) being illiterates (Table 2)

Table 2: Socio-demographic characteristics of the respondents.

Variables	Number of subjects (150)	Percentage (%)
Gender		
Male	89	59.3
Female	61	40.6
Religion		
Hindu	62	41.3
Muslim	45	30.0
Christian	31	20.6
Others	12	8.0
Sex of Head of Fan	nily	
Male	132	88.0
Female	18	12.0
Education of Head	of family	
Illiterate	55	36.6
Primary/Middle school certificate	43	28.7
High school certificate	18	12.0
Intermediate or post high school diploma	22	14.7
Graduate or post graduate	12	8.0
Type of housing		
Kaccha house	13	8.6
Pukka house	137	91.3
Age of HOF (years)		
$(Mean \pm SD)$	43 ± 12	
Family Income (Rs.) monthly	1000	
Minimum	1800	
Maximum	38000	

Almost 58% (87/150) were not aware of the health insurance schemes. Majority (68%) had not enrolled in any of the government or private health insurance scheme. Only 30% of the respondents had some knowledge about Ayushman Bharat as a National health insurance scheme and the leading source of information were Television, radio and newspaper (17.3%) among them. However, only 8% of our respondents were beneficiaries of Ayushman Bharat health insurance scheme. (Table 3)

Participants who had not heard of the term "Ayushman Bharat" were not asked to answer the knowledge related questions. So only 30% (45/150) of the total respondents could fill this part of the questionnaire. In that majority (32/45) opined that Ayushman Bharat health scheme is for the poor and below poverty line households in India. However, only 40% (18/45) of them knew that the scheme benefits can be availed without enrolment process and no

premium to be paid. More than half (24/45) of the respondents were not aware of the Rs.5 lac health cover for every family and this cover having no restriction on family size. Only 20% (9/45) of them knew that the scheme covers pre-existing diseases. 46.6% (21/45) felt that priority is given to the children, women and senior citizens, only 24.5% (11/45) of them were aware of the cashless and paperless administration and registration under this scheme. 42.2% (19/45) of them said this scheme covered surgeries, day-care treatment, hospitalization, vaccination and medicines. (Table 4)

Table 3: Awareness and source of information about health insurance among respondents.

	Number of subjects (150)	Percentage %			
Aware of health insurance schemes					
Yes	63	42			
No	87	58			
Enrollment in any govern health scheme	Enrollment in any government or private health scheme				
Employees State insurance (ESI)	16	10.7			
Rashtriya Swasthiya Bhima Yojana (RSBY)	11	7.3			
Private health insurance scheme	12	8			
Any other center/ state government health scheme	9	6			
Not enrolled in any health scheme	102	68			
Ayushman Bharat – PMJ a National Health Insurar					
Yes	45	30			
No	105	70			
Source of information abo	out Ayushman	Bharat			
TV/Radio/ Newspaper	26	17.3			
Family/ Friends	5	3.3			
Internet	4	2.6			
Panchayat	8	5.3			
From ASHA/ ANM	2	1.3			
No information about the scheme	105	70			
Are you a beneficiary of Ayushman Bharat Health Insurance Scheme?					
Yes	12	8.0			
No	138	92.0			

Only 8% (12/150) of the total respondents could answer the utilisation of scheme related questions of which the help desks and Arogya Sahayta Kendra at empanelled hospitals helped 58.4% (7/12) of these participants in knowing the fact that they were beneficiaries of Ayushman Bharat health insurance scheme.

Table 4: Knowledge regarding Ayushman Bharat (n= 45).

	Frequency	%
Ayushman Bharat Scheme		r and
below poverty line househ		
Yes	32	71.1
No	13	28.9
Benefits of scheme can be	availed withou	t
enrolment process and no	premium to be	paid
Yes	18	40.0
No	27	60.0
Healthcare cover of Rs.5la	c per family ar	nd there is
no restriction on family siz	æ	
Yes	13	423128.8
No	8	17.8
Don't know	24	53.4
Covers pre- existing diseas	ses	
Yes	9	20.0
No	17	37.8
Don't know	19	42.2
Priority to child, women &	z senior citizen	
Yes	21	46.6
No	8	17.8
Don't know	16	35.6
Cashless and paperless add	ministration $\&$	
registration		
Yes	11	24.5
No	18	40.0
Don't know	16	35.5
Covers surgery, daycare –		
hospitalization, vaccination		
Yes	19	42.2
No	5	11.2
Don't know	21	46.6
Oral health care/ Dental ca	are covered un	aer
Ayushman Bharat	2	4.4
Yes No	43	95.6
- 1.0		93.0
Illness covered under the s Maternal and child health		22.2
services	10	<i>LL.L</i>
Cancers	6	13.3
Cardiology	4	8.9
Trauma cases	5	11.1
Non-communicable	8	17.8
diseases	J	17.0
All of the above	12	26.7
		20.,

Majority of them (10/12) of them had not availed any treatment in the empanelled hospitals for either themselves or their family members. Accordingly, 11 of the 12 scheme beneficiaries who were among our participants felt that this cashless scheme is useful only for hospitalization and not for OPD services. Whereas, few of them believed that empanelled hospitals are helping the beneficiaries utilize this health scheme. None of our beneficiary participants availed dental treatments at either primary, secondary or tertiary level hospitals. When asked to rate the services of

Ayushman Bharat, 10 of our beneficiary participants could not rate it as they had not utilized the services. (Table 5).

Table 5: Utilization of Ayushman Bharat health insurance scheme among beneficiaries.

	Frequency (n=12)	%		
	How did you come to know that you are a			
beneficiary of this scheme?				
Official website	0	0		
Letter from prime minister	5	41.6		
After contacting Call center	0	0		
Help Desk/Kiosk/ Arogya				
Sahayta Kendra at the	7	58.4		
hospitals				
Did you or any family mem	ber avail any			
treatment under Ayushman	Bharat?			
Yes	2	16.6		
No	10	83.4		
This cashless scheme is usef	ul only for			
hospitalization and not OPI) services			
Yes	11	91.6		
No	1	8.4		
The empaneled hospitals ar	e helping the			
beneficiaries utilize this hea	alth scheme			
Yes	5	46.7		
No	3	25.0		
Don't know	4	33.3		
Did the scheme help you in	getting dental			
treatments				
Yes	0	0		
No	12	100.0		
Rate the services of Ayushn	nan Bharat heal	th		
insurance scheme				
Excellent	0	0		
Good	2	16.7		
Satisfactory	0	0		
Bad	0	0		
Not availed any services yet being a beneficiary	10	83.3		

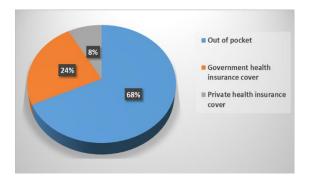


Figure 1: Distribution of study participants based on payments made towards personal health expenses.

68% of our total study participants made out of pocket payments (OOP) towards personal health expenses when

24% of them used Government health insurance cover and 8% holding a private health insurance policy. (Figure 1)

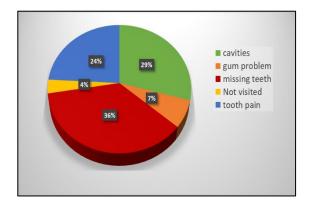


Figure 2: Distribution of study participants based on having visited a dentist in the past for different oral problems.

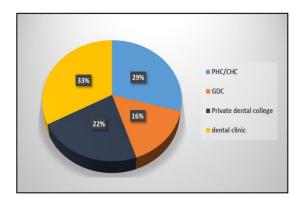


Figure 3: Distribution showing facility visited for dental problems by the study participants.

36% of them visited the dentist earlier with a complaint of missing teeth followed by cavity problems (29%) and tooth pain (24%) (Figure 2)

33% of the study participants visited a dental clinic while 29% visited a PHC/CHC followed by private dental colleges (22%) and Government dental colleges (16%) (Figure 3)

DISCUSSION

The study investigated the level of awareness and knowledge of PMJAY and its utilization the among the outpatients visiting the hospital OPDs in Bangalore (Urban and Rural). The awareness regarding some kind of health insurance was 42% which is quite low compared to a community based study done in 2007 by Reshmi et al where 64% were aware of health insurance.⁵ 32% of our study participants were enrolled and covered under some form of health insurance which was slightly higher when compared with the World bank report published in 2012 which stated that 25% of the Indians had access to health insurance.⁶ The reason for the rise in number may be because of the success of RSBY and other government

funded schemes over the years. Though health insurance is not a new concept as some of them were beneficiaries of the erstwhile RSBY/state specific schemes, the level of awareness and knowledge of PMJAY is not yet high as only 30% of our study participants were aware of Ayushman Bharat health insurance scheme. This may be attributed to low level of education of our study population.

Only 8% of our study participants were beneficiaries of Ayushman Bharat Health insurance scheme (PMJAY). This may also be attributed to low level of education and awareness of our study participants. According to sources, probable reason for very few beneficiaries was found to be that the letters and the beneficiary cards sent to the targeted beneficiaries had reached but not opened since they couldn't read.

In more than 68% of the study participants, out of pocket expenditure (OOPE) for healthcare treatments was evident. Apparently, PMJAY can potentially reduce the incidence of catastrophic health expenditure for the lower socioeconomic class in India. However, its impact on reducing the OOPE will be very limited owing to the fact that currently 60% of OOPE is incurred on outpatient care, which is not included in the scheme.7 The cost of medicines and diagnostics in OPD are the major contributors to OOP expenditures, which were neither covered in RSBY nor in PMJAY.2,8 Ayushman Bharat health insurance scheme can probably be helpful to the lower socio-economic strata population who require frequent hospitalized care or expensive procedure such as dialysis, chronic heart diseases, cancer treatments, orthopaedic surgeries etc.

Most of the study participants visited government hospitals to avail treatments. This could be due to higher number of empanelled hospitals of this scheme coming under Government. The cost of treatments being less in Government hospitals compared to its private counterparts.

Around 96% of our respondents had visited the dentist in the past and got treated. Similar findings have been reported in the World Health Survey (WHS) conducted in 2003 which stated that Karnataka had the highest percent (72%) of respondents treated for oral health problems in India. Only 3% of our study participants were aware about the dental coverage under Ayushman Bharat health insurance scheme. None of our study participants who were beneficiaries had utilized the dental benefits under this scheme. Inadequate awareness amongst intended beneficiaries is a problem common to many government initiatives. Though this scheme provides basic oral health services, tobacco counselling and cessation at the primary and secondary level with hospitalization cover for oral cancer, maxillofacial surgeries and road traffic accidents at tertiary level, none of the participants were aware of the scheme benefits. To overcome this problem, emphasis has to be given to information, education and communication (IEC) activities thereby creating awareness on oral health by the government.

To the best of our knowledge, this is the first study highlighting the awareness and utilization of dental services under Ayushman scheme in Bangalore, full efforts has been put forward to find out the weakness in a small proportion of population visiting the dental hospitals. However, further studies have to carried out at the community level to know the potential of this scheme.

There are few limitations to this study. Results of our study needs to be cautiously interpreted and generalized. For example, study participants were identified from selected hospitals, though ideally Ayushman Bharat beneficiaries and non Ayushman Bharat beneficiaries should have been identified through household surveys. Qualitative methods (focus group discussions or interviews) to obtain in-depth perceptions of the beneficiaries would have better reflected the gaps in the scheme design. A larger sample size could have led to a better in depth analysis of the current status of this scheme in Bangalore.

CONCLUSION

It is clear that Ayushman Bharat has some attractive features and the potential to make a big difference to the lives of the poor. The government has played a proactive role in this by making available primary, secondary and tertiary healthcare facilities for the poor which would act as strong pillars in achieving UHC in India. Moreover, for such schemes to achieve their objectives, State Governments have to be more accountable for implementation of the scheme. Oral diseases are a major public health problem with universal distribution and affecting all age groups. However, despite this only few seek dental care. There is a need to bridge the gap between actual dental needs of the population and the demand for dental care. There is lack of awareness and underutilization of dental services covered under Ayushman Bharat health insurance scheme. Though government health insurance schemes like ESI are operational since 1952, Yashaswini Scheme in Karnataka since 2003, the awareness regarding the benefits of such schemes are still lacking among its beneficiaries. There is a need for dental care to be made available to the rural strata of the population. Dental awareness camps, tobacco counselling sessions and other outreach programs could be the solution to more active utilization of the dental benefits under this scheme.

Recommendations

Primary health centres should be of prime focus as they provide health care facilities at grass root level for the inaccessible population. There is an urgent need to strengthen and increase the capacity of health facilities and health infrastructure in the country to meet the demands that will be produced by this scheme. The scheme only targets those living below the poverty line which unjustly

puts a larger segment of the middle class in a very vulnerable position. Mass media and information campaigns can help the scheme to attain its maximum utilization.

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