Research article

A study on the utilization of Ayushman Bharat arogya scheme among patients admitted to a tertiary care hospital during Covid pandemic

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ABSTRACT

Introduction and Aim: In India, most of the households face financial hardships due to catastrophic health care expenses. In response to covid-19 pandemic, the government launched the Ayushman Bharat Arogya Karnataka program, which offered health insurance for the coverage of covid-19 treatment costs and prevent families from undergoing financial hardships and incurring healthcare costs. The purpose of this study was to investigate and compare the utilization of the Ayushman Bharat insurance scheme among covid-19 positive and non-covid patients admitted to a tertiary care hospital in the Karnataka district of Dakshina Kannada.

Methodology: Data was collected from medical records of a tertiary care hospital in the Dakshina Kannada District of Karnataka for this cross-sectional study. The data collected was analyzed using the Microsoft Excel program, and the results subjected to statistical analysis using IBM SPSS software ver.20.

Results: The study found that there was a significant association between utilization of ABArK among patients (Covid and non-Covid) admitted to the hospital. While the utilization of ABArK among covid patients was found to be 51.3%, the utilization among non-covid patients was only 14.1% ($\chi 2$= 1242.32, p value <0.001).

Conclusion: To improve the utilization of this scheme, public awareness activities must be conducted. As a result, less out-of-pocket expenditure would be incurred and access to healthcare facilities made easier.

Keywords: ABArK; Ayushman Bharat Arogya; AB-PMJAY; health insurance.

INTRODUCTION

Universal health coverage is defined by the World Health Organization as a system for ensuring that all people can access promotional, preventive, curative, rehabilitative, and palliative health services when and where they need them, at a reasonable cost, without any financial hardship (1). This requires individuals and communities to have access to high quality health services to care of their own as well as their family's health. Several countries have adopted the concept of health insurance schemes as a means of providing financial health security (2,3). Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is India's government-funded health insurance scheme that has covered over 10.74 lakh poor and vulnerable families (3,4). In India, Karnataka State ranks first in successfully implementing this health care scheme benefiting a large section of below poverty line (BPL) and above poverty line (APL) families (5,6). This scheme has been renamed as Ayushman Bharat Arogya Karnataka (ABArK) in Karnataka, the objectives being to provide primary health care, specified secondary and tertiary health care benefits to all residents of the state (6). The scheme also conceives reducing out-of-pocket expenditure on health care through the support and participation of the private sector and through existing network of hospitals (7). Insurance is portrayed as a social gadget to lessen or eliminate the risk of life and property (3). Although schemes like AB-PMJAY have helped to rectify health spending disparities between states, they have not been adequate to make up for the fundamental economic limitations of poorer states (8). A patient who tests positive for Covid-19 typically spends 7 to 10 days in the hospital, costing on average about Rupees 76,644 ± 12,706 per person (9, 10). In this study, we aimed to know the utilization of the Ayushman Bharat Arogya Karnataka scheme among covid and non-covid patients admitted in the tertiary care hospital at Mangalore, Dakshina Kannada District, Karnataka.

MATERIALS AND METHODS

The present study is a record-based, cross-sectional study undertaken at a tertiary care hospital at Mangalore, Dakshina Kannada District, Karnataka. Patient data was collected through the hospital medical records section admitted to the hospital during the period July 2020-May 2021. Prior permission to collect data from patient records was obtained from the concerned authority of the hospital. Patient records were screened manually to obtain

relevant information such as their socio-demographic characteristics, coverage, and ABArK utilization.

Statistical analysis

The data collected was analyzed using Microsoft Excel (version 2016). Statistical analysis was carried out using the Chi-square test in the IBM SPSS software version 20.

Ethical consideration

The study was approved by the Institutional ethical committee

RESULTS

Study subjects included a total of 1367 covid-19 positive and 16684 non-covid patients who were admitted to a tertiary care hospital in the Dakshina Kannada district of Karnataka between July 2020 and May 2021. The age groups of the patients admitted have been shown in Table 1. Among all the covid -19 positive patients admitted, admission in the age group of 21-40 years was highest and 0-20 years was the lowest. Among the non-covid patients admitted, admissions were the highest in the age group of 41-60 and the lowest among patients aged above 61 years.

Table 1: Age-wise distribution of the study subjects

Age group	Covid patients (n=1367)	Non-Covid patients (n=16684)
	No (%)	No. (%)
0 -20	51(3.7)	3474 (20.8)
21-40	464 (33.9)	4351(26.0)
41-60	430 (31.4)	5933 (35.5)
> 61	422 (30.8)	2926 (17.5)

The patients admitted were classified based on the ward type admitted to Table 2 and to the state from which they came from Table 3. Based on the utilization of the ward, it was observed that 66.2% of the 1367 covid positive patients (550 males and 356 females) to be admitted to the general ward, while the remaining admitted (287 males and 174 females) were admitted in the special ward. Similarly, among 16684 non- covid patients 72.6% comprising 6885 males and 5230 females were admitted in the general ward and the rest 27.38% patients (2678 males and 1891 females) in special wards.

Table 2: Utilization of ward type among covid and non-covid patients

Ward type	Patients admitted	
	Covid	Non- Covid
General	906 (66.2)	12,115 (72.6)
Special	461 (33.7)	4569 (27.38)

Among all the patients admitted during the period, the highest recorded was from Karnataka State for both covid (93.9 %) and non-covid (86.21%) patients respectively. This was followed by patients from Kerala State with 4.75 % and 13.13 % for covid and non-covid respectively. Of the 54 patients admitted from Maharashtra 13 were those with covid, while 41 were non-covid patients. A small percentage of patients admitted were from other states (Table 3)

Table 3: State-wise distribution of study subjects

State	Covid patients (n=1367)	Non-Covid patients (n=16684)
	no. (%)	no. (%)
Karnataka	1284 (93.9)	14382 (86.21)
Kerala	65 (4.75)	2191(13.13)
Maharashtra	13 (0.95)	41 (0.227)
Others	5 (0.37)	70 (0.419)

The study also assessed the utilization of the health insurance ABArK among the study subjects. Based on utilization, the patients were further categorized into males and females for the covid and non-covid patients respectively (Table 4). Table 4 shows that, among the covid-19 patients who are male, the utilization of ABArK was 51.7%, whereas utilization among non-covid male patients it was only 11.6%. This was found to be statistically significant ($\chi2$= 1007.73, p value <0.001). Among the female covid-19 positive patients, the utilization of ABArK was 50.6% whereas utilization among non-covid-19 female patients was only 15.4% and the same was found to be statistically significant ($\chi2$= 417.2, p value <0.001).

Utilization of ABArK among covid male and female patients was statistically not significant ($\chi2$= 0.17, p value = 0.67). However, utilization of ABArK among non-covid male and female patients was statistically significant ($\chi2$= 53.05, p value <0.001).

Table 4: Gender-wise utilization of ABArK scheme among covid and non-covid patients

ABArK utilization	Covid patients		Non- Covid patients	
	Male n=837	Female n=530	Male n=10821	Female n=7121
Utilized	433 (51.7)	268 (50.6)	1258 (11.6)	1095 (15.4)
Not utilized	404 (48.3)	262 (49.4)	9563 (88.3)	6026 (84.6)

DISCUSSION

The Ayushman Bharat Arogya Karnataka (ABArK) scheme has been a boon to residents of the state during the pandemic. The ABArK scheme was intended to provide free admittance to medical care facilities and provide patients enrolled, with all health care benefits, thereby reducing the healthcare expenditures especially of the economically poor and vulnerable families (4).

Studies have reported patients and families to be financially affected particularly during the first and second wave of the pandemic. However, patients admitted in the general ward and who are qualified for Ayushman Bharat Arogya Karnataka (ABArK) scheme as per Socio- Economic and Caste Census (SECC) 2011 and other criteria in the state of Karnataka were seen benefited (5).

The current study found that, in contrast to 14.1% of non-covid patients, 51.3% of Covid-19 patients (those with positive test results who were admitted to the general ward) had used the ABArK plan. This percentage was significantly higher when contrasted to a Madhya Pradesh report that stated that only less than 10% of hospitalised Covid-19 patients could access the benefits under the Ayushman Bharat scheme (11). Patients receiving care at private tertiary care hospitals are less likely to use the Ayushman Bharat programme, which is likely due to the requirement that they obtain an obligatory letter from the taluk or district hospital to be included in the scheme.

As seen in the present study, the utilization of ABArK was higher among Covid-19 positive male patients as compared to non-covid male patients. Similarly, among the female Covid-19 positive patients the utilization of ABArK was higher, whereas the utilization among non-covid female patients was low during this period. These simple problems are to be addressed by the state and central government for further improvement and effective utilization of the scheme. As the first wave of admissions slowed down in the month of November 2020, fewer admissions were observed from January through March. With the beginning of the second wave of Covid-19, a rise in the number of cases was observed in the months of April and May 2021.

According to the current study utilization of the Ayushman Bharat scheme in the private tertiary care hospital during covid-19 was 16.9%. However, according to the report of Kumar *et al.*, (12), the usage rate was 40% in Karnataka. The inpatient admissions at tertiary care hospitals were decreased probably due to fear of Covid-19, because of which the utilization of the Ayushman Bharat scheme was also observed to be reduced.

There was no significant association found between male and female covid patients in the utilization of ABArK scheme. This was because all the covid patients irrespective of their gender were directly enrolled in ABArK as per the government order to reduce the incidence of death due to covid and for better care of everyone of this country. This was an important decision taken by the Government of India to fight against covid pandemic and to show the world that India has better healthcare, Government health insurance scheme to all the citizens of the nation. Significant association was found between utilization of the scheme among male and female non covid patients admitted to the hospital in the present study. As there are limited studies currently on this aspect, there is a lot of scope to understand the ground reality on the utilization of the scheme at various levels of healthcare facilities.

CONCLUSION

As a form of social security, AB-PMJAY (Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana) is one of the top health insurance programmes. By organising public awareness campaigns, the implementation of this system needs to be substantially improved. The families would benefit by having less out-of-pocket expense and burden in accessing the healthcare facility if consumers were encouraged to use the programme. To effectively reduce out-of-pocket costs, Ayushman Bharat may be used for curative therapies as well as prevention and control measures.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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