

ORIGINAL ARTICLE

Health insurance in its way to combat financial crisis in breast cancer treatment

Rashmi Kundapur¹, Sachin Chandramohan², Vijith Shetty³, Bhavesh Modi⁴

¹Professor, Department of Community Medicine, K. S. Hegde Medical Academy, Deralakatte, Mangalore, ²Post Graduate, Department of Community Medicine, K. S. Hegde Medical Academy, Deralakatte, Mangalore, ³Assistant Professor, Department of medical Oncology, Justice K. S. Hegde Charitable Hospital, Deralakatte, Mangalore, ⁴Associate Professor, Department of Community Medicine, GMERS, Gandhinagar, Gujarat

Abstract	Introduction	Methodology	Results	Conclusion	References	Citation	Tables / Figures
--------------------------	------------------------------	-----------------------------	-------------------------	----------------------------	----------------------------	--------------------------	----------------------------------

Corresponding Author

Address for Correspondence: Dr Sachin Chandramohan, Post Graduate, Department of Community Medicine, K.S.Hegde Medical Academy, Deralakatte, Mangalore
E Mail ID: sachin676@gmail.com



Citation

Kundapur R, Chandramohan S, Shetty V, Modi B. Health Insurance in its way to Combat Financial Crisis in Breast Cancer Treatment. Indian J Comm Health. 2019;31(3):396-400.

Source of Funding: Nil **Conflict of Interest:** None declared

Article Cycle

Received: 21/04/2019; **Revision:** 11/05/2019; **Accepted:** 15/06/2019; **Published:** 30/09/2019

This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

Abstract

Background: Breast cancer is the most commonly diagnosed cancer among women, along with its diagnosis it brings disarray and economic burden on family. Its treatment is costliest compared to any other cancers. Health policies and health insurances are introduced to bridge the gap between patients and quality cancer care. We aim to understand the level to which health insurance help the breast cancer patients in reducing economic burden due to cancer **Methodology:** Cross sectional study done in Justice K.S Hegde Hospital in month June, 2018 to August, 2018 with participants being patients with breast cancer. Patients were contacted over the phone and a questionnaire was introduced to those willing to talk on their economic expenditure. **Results:** 73% of people had insurance to treat breast cancer of which 52% had advantage of Vajpayee Arogya Shree. 24% of people had insurance paid fully for treatment and 34% received partially, it reduced their burden by 51-75%. 46% of people had the cost >1 lakh for treatment which could be burden for 27% who didn't have insurance, and this was among patients from neighboring state for treatment. **Conclusions:** Insurance reducing the burden is ensured; but choice of hospital for treatment is not with the patient, which is a burden.

Keywords

Breast Cancer; Health Insurance; Economic Burden; Insurance Schemes; Vajpayee Arogyashree.

Introduction

Breast cancer is the most commonly diagnosed cancer among women in the world and in India. In India, the incidence rate of breast cancer is 25.8 per 100000. (1) There is a significant increase in the incidence and cancer-associated morbidity and mortality in the Indian subcontinent as described in global and Indian studies.

The incidence of breast cancer has increased with the better diagnostic methods and with the increased awareness of the necessity for screening.

Studies have shown that the cost of treatment of breast cancer is higher after diagnosis and studies have shown that treatment cost of breast cancer is highest among all cancers. Hospitalization is the major reason for the cost. (2,3) Total costs depends upon the age at the time of diagnosis and stage of

cancer. Due to the high costs associated with the treatment, insurance coverage plays a critical role in the access and utilization of the available treatments. (4)

In India, the central and state governments have different insurance schemes to combat the burden due to cancers. Especially for screening of Carcinoma Breast, education and spreading awareness, government is putting in a lot of efforts.

For the cancer treatments, many government schemes are being utilized, namely Vajpayee Arogyashree scheme, Sampoorna Arogya scheme, Rajiv Gandhi Arogya Yojana, Yeshasvini Scheme etc. Even though these schemes help patients to reduce their burden due to cancer, still many have to depend on OOP expenditures to meet the treatment costs.

Aims & Objectives

To understand the level to which health insurance help the breast cancer patients in reducing economic burden due to cancer.

Material & Methods

For economical evaluation, a cross sectional study was conducted among patients with breast cancer who underwent treatment in Justice K S Hegde hospital, Mangalore in last 2 years. Using thumb rule (if sample is >1000 take 1% of sample, If sample between 501-1000 take 10-20%, If sample between 101-500 take 20-30%, If sample between 51-100 take 30-50%, If sample <50 take 50-100%) and considering average patient pool in Mangalore, sample size was calculated to be 45. The patients were contacted on phone with the phone number details collected from medical records department. The patients or their care-givers were introduced to a construct, content and linguistically validated questionnaire after taking their verbal consent. The questionnaire consisted of the type of insurance used for cancer treatment, how much amount they received from it, total expense for treatment till date, any extra help received other than insurance, how far the insurance had helped them in reducing economic burden, the travel costs for visit to hospital, and other expenses as a part of treatment. The patients who were found expired on contacting through phone and who were not willing to respond to the questionnaire were excluded from the study. The costs extracted were calculated in Indian Rupees, and details regarding the types of insurance used and perceived burden were taken in

percentage. Mean, standard deviation and range was used to calculate continuous data. Frequencies and percentages was used to calculate categorical data.

Results

In Karnataka, there are many health schemes by the Government for Karnataka citizens. Especially for BPL, Vajpayee Arogyashree scheme and for APL Rajiv Gandhi Arogya Yojana. Along with it there were Yeshasvini scheme, Sampoorna Arogya scheme, ESI scheme etc. Use of private insurances were found to be nil in this study. Patients entirely depend on Government schemes and out of pocket expenditure to meet the treatment costs. Among the study population, 73% had insurance to treat breast cancer. Vajpayee Arogyashree scheme was the most commonly used, approximately 62%. (Table 1) 24% of people had insurance paid fully for treatment and 34% received partially. (Table 2) Around 46% had treatment expenses greater than 1 lakh INR. And 11% had traveling costs more than 10,000 INR. (Table 3) Only 8% had extra expenses, associated with treatment. 29% among the accompanying person had admitted to have suffered loss of work or class. Majority admitted of having burden on income and expenditure in family. Among the persons who received insurance, it reduced their burden by 51-75%, but it was still a burden for 27% who didn't have insurance, and this was studied among the patients from neighboring state coming for treatment. (Table 4)

Among the study population, 73% had insurance to treat breast cancer. Vajpayee Arogyashree scheme was the most commonly used, approximately 62%. And there were 20% who did not have any benefit of insurances, and all of them were patients who came for treatment from neighboring state. 24% of people had insurance paid fully for treatment and 34% received partially. Which was of a great support to their family in reducing the economic burden put by the treatment costs for breast cancer.

More than 46 % of people had treatment costs of more than INR 1 lakh and approximately 28% had treatment costs less than INR 50,000. This gap was understood to be due to the stage of diagnosis and treatment regime undergone. As this this study considered only breast cancer patients and not the stages and treatment regime.

Only 8% had extra expenses, associated with treatment due to any adverse effects occurred as a

part of treatment. 29% among the accompanying person had admitted to have suffered loss of work or class. This was because the persons accompanying or the care-givers were daughters or daughter in laws, who were mostly home makers by profession.

Majority admitted of having burden on income and expenditure in family due to the breast cancer treatment. But, surprisingly there were about 24% who said that, the diagnosis and treatment of breast cancer did not or had 0% effect on their monthly expenditure. This could be because, they females affected were not working and the treatment costs was met by insurance.

Among the persons who received insurance, it reduced their burden by 51-75%, but it was still a burden for 27% who didn't have insurance, and this was studied among the patients from neighboring state coming for treatment

Discussion

Studies have shown that the breast cancer treatment is the costliest among all cancer treatments. (5) So, the treatment for breast cancer adds to burden to the family, which is already shattered with the diagnosis itself. The higher costs and late diagnosis prevented many from getting better treatments. (6) Many government insurance schemes led to increased utilization of tertiary health care facilities along with mortality reductions from insurance covered conditions. (7) As mentioned by Neeraj Sood et al in their study "insuring poor households for efficacious but costly and underutilized health services, coupled with recruitment of patients who could benefit from these health services, significantly improved population health in India". This study found that all the residents of Karnataka are getting benefits of government schemes, for efficacious and underutilized treatment facilities for treatment of breast cancer. Though the benefit of schemes are available, the patients still have to depend on out of pocket expenses to meet the treatment costs, one of the reason is lesser access to medications which are critical for secondary prevention and as mentioned in study by Upendra Bhojani et al "high OOP spending for medications has remained a consistent feature in India and is not limited to chronic conditions" (8) these tends to cause a burden to family, (9) along with it the loss of work or class for the accompanying person or caretaker, and it causes serious burden on the income and expenditure of the family. The

estimation of expenditures of cancer patients includes both direct medical and non-medical costs. The direct costs include buying medicine, hospitalization, pathological tests, medical practitioner consultancy, travel, lodging while the indirect costs are loss of income during treatment, premature death and effect on the income of other family members etc. The expenses of treatment costs go higher depending on the treatment regimen, total no of visits to hospital, no. of hospital admission days etc. As mentioned by Ali et al in his study, as the no. of cancer patients is alarmingly increasing in India, and it affects Indian GDP greatly, if the cancer incidences would have been avoided; by adopting the preventive measures; the amount spent on treatment could have been used for other. (10) This amount of money would have been used somewhere else for the development of the country. Also, the fact that people coming from neighboring state don't get any benefit of Govt. schemes in order to meet the entire treatment costs, out of pocket expenditure adds a lot of burden on the patient and their family.

Conclusion

Insurance reducing the burden is ensured; but choice of hospital for treatment is not with the patient, which is a burden. Patients coming from neighboring state; for whom Mangalore is the nearest option for better treatment, lack the financial assistance which Karnataka government dispenses to its residents, and thus the non-residents visiting hospitals in Mangalore have to bear the extra financial burden in terms of travel, stay and food costs along with treatment costs. There was no other financial assists received for treatment, and patients had to depend on out of pocket expenses to meet the costs.

Recommendation

Health insurance must cater patients hailing from all sections of the society. Honoring the principles of primary healthcare, Government of India has launched Ayushman Bharat, which hopefully will fulfill the need for a broader scheme so that natives of other states can also avail financial assistance to narrow down their healthcare expenditure.

Limitation of the study

There were many limitations for this study, patients were contacted on phone and details were collected with help of questionnaire, there could be recall bias. Patients with breast cancer were randomly

contacted without differentiating treatment regimen or stage of cancer or even age group. The patients who received insurance schemes facility admitted that it did help in reducing the burden. But the schemes was, limited to residents to Karnataka only, as Mangalore shares close border with Kerala, people from their also comes for better treatment. They don't get any of these benefits. Entire treatment costs should be paid as out of pocket expense. So, it suggests of a better nationalized treatment plan or a universal health plan were any Indian citizen can get benefit of government schemes equally and anywhere in India

Relevance of the study

Insurance schemes and government policies reduces economic burden of patients and their family is true, but still many depends on OOP owing to many reasons related to healthcare. We understood that the patients from neighboring state have to depend wholly on OOP for treatment since the study was done in a hospital located at the border of 2 neighboring states where they don't get any benefit received by natives.

Authors Contribution

RK: concept, design, data analysis, manuscript editing. SC: concept, design, literature search, data acquisition manuscript preparation. VS: concept, manuscript editing and review. BM: design, manuscript editing and review

References

1. Malvia S, Bagadi SA, Dubey US, Saxena S. Epidemiology of breast cancer in Indian women. *Asia-Pacific Journal of Clinical Oncology* [Internet]. 2017 Aug 1 [cited 2018 Aug 18];13(4):289–95. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/ajco.12661>
2. Allaire BT, Ekwueme DU, Guy GP Jr, Li C, Tangka FK, Trivers KF, Sabatino SA, Rodriguez JL, Trogon JG. Medical Care Costs of Breast Cancer in Privately Insured Women Aged 18-44 Years. *Am J Prev Med*. 2016

- Feb;50(2):270-7. doi: 10.1016/j.amepre.2015.08.035. PubMed PMID: 26775906; PubMed Central PMCID: PMC5836737. [PubMed].
3. Elias F, Khuri FR, Adib SM, Karam R, Harb H, Awar M, Zalloua P, Ammar W. Financial Burden of Cancer Drug Treatment in Lebanon. *Asian Pac J Cancer Prev*. 2016;17(7):3173-7. PubMed PMID: 27509947. [PubMed].
4. Figueiredo FWDS, Almeida TCDC, Cardial DT, Maciel ÉDS, Fonseca FLA, Adami F. The role of health policy in the burden of breast cancer in Brazil. *BMC Womens Health*. 2017 Nov 28;17(1):121. doi: 10.1186/s12905-017-0477-9. PubMed PMID: 29179715; PubMed Central PMCID: PMC5704361. [PubMed]
5. Giordano SH, Niu J, Chavez-MacGregor M, Zhao H, Zorzi D, Shih YT, Smith BD, Shen C. Estimating regimen-specific costs of chemotherapy for breast cancer: Observational cohort study. *Cancer*. 2016 Nov 15;122(22):3447-3455. doi: 10.1002/cncr.30274. Epub 2016 Oct 10. PubMed PMID: 27723214; PubMed Central PMCID: PMC5479741. [PubMed]
6. Early cancer diagnosis saves lives, cuts treatment costs [Internet]. [cited 2019 May 29]. Available from: <https://www.who.int/news-room/detail/03-02-2017-early-cancer-diagnosis-saves-lives-cuts-treatment-costs>
7. Sood N, Wagner Z. Impact of health insurance for tertiary care on postoperative outcomes and seeking care for symptoms: quasi-experimental evidence from Karnataka, India. *BMJ Open*. 2016 Jan 6;6(1):e010512. doi: 10.1136/bmjopen-2015-010512. PubMed PMID: 26739744; PubMed Central PMCID: PMC4716202. [PubMed]
8. Bhojani U, Thriveni B, Devadasan R, Munegowda C, Devadasan N, Kolsteren P, Criel B. Out-of-pocket healthcare payments on chronic conditions impoverish urban poor in Bangalore, India. *BMC Public Health*. 2012 Nov 16;12:990. doi: 10.1186/1471-2458-12-990. PubMed PMID: 23158475; PubMed Central PMCID: PMC3533578. [PubMed]
9. Guy GP, Yabroff KR, Ekwueme DU, Virgo KS, Han X, Banegas MP, et al. Healthcare Expenditure Burden Among Non-elderly Cancer Survivors, 2008-2012. *Am J Prev Med*. 2015 Dec;49(6 Suppl 5):S489-497.
10. Ali PI, Wani W, Saleem K, Correspondence. Cancer Scenario in India with Future Perspectives. *Cancer Therapy*. 2011 Nov 1;8:56–70.

Tables

TABLE 1 DISTRIBUTION OF BREAST CANCER PATIENTS WITH TYPE OF HEALTH INSURANCE BEING UTILIZED

Insurance type	No. of people(n)	Percentage (%)
Vajpayee Arogya Shree	28	62.22
Rajiv Gandhi Arogya Yojana	02	4.44
Yesaswini Scheme	02	4.44
Sampoorna Arogya	03	6.66
RSBY	01	2.22
None	09	20

TABLE 2 EXPENDITURES FOR TREATMENT AND TRAVEL

Amount costing for treatment			Expenditure in travel		
Rs	No.	%	Rs	No.	%
<50,000	13	28.89	<1000	5	11.11
51000-75000	07	15.56	1001-3000	13	28.88
76000-100000	04	8.88	3001-5000	15	33.33
>1 lakh	21	46.66	>5001-10000	7	15.55
			>10000	5	11.11

TABLE 3 EFFECT OF CANCER ON EXPENDITURE

% effect on monthly expenditure	Total no. of people reported to have financial burden crisis	
	No.	%
0	11	24.44
<10	1	2.22
11- 30	4	8.88
31-50	7	15.55
51-75	16	35.55
>75	6	13.33

TABLE 4 INSURANCE AS A BOON IN TREATMENT OF BREAST CANCER

Percentage (%)	Patients responded (n)
<10	1
11-25	4
26-50	7
51-75	16
>75	6

ELECTION NOTICE

Dear Members,

As per the constitution of IAPSM UPUK, all the members of IAPSM UPUK are hereby informed that Nomination Form for the election of Office Bearers of IAPSM UPUK is now available on the official website (www.iapsmupuk.org). The interested candidates can send their nominations for the election of the following posts of IAPSM UP & UK state chapter for the session 2020 –2021 starting from 1st April 2020.

Vice -President: 01 Post / Secretary: 01 Post / Chief Editor: 01 Post / Executive Member: 09 Posts (06 UP & 03 UK)

The eligibility criteria for the posts are given in the constitution of IAPSM UPUK. The last date for nomination is 30/11/2019 and last date of withdrawal of nomination is 07/12/2019. Candidates seeking election for the post of Vice – President, Secretary and Chief Editor should send a demand draft of Rs. 1000/- and those for the post of the members of executive committee of governing council Rs. 500/- along with the duly filled nomination form. The details of the nomination fee and its mode of payment etc are given in the prescribed nomination form, which can be downloaded from the official website of IAPSM UPUK state chapter (www.iapsmupuk.org).

For conducting fair elections, Prof. V. K. Srivastava has been appointed by the Governing Council as Chief Election Officer. I hope this democratic way of electing our office bearers of IAPSM UP & UK will strengthen our association many fold. The elections will be held on the first day of IAPSM UPUK conference during the General Council Meeting (GBM). I look forward to have active participation and cooperation all over.

*The nominations for the different posts for which the elections are to be held in IAPSM UP & UK state chapter for the session 2020 –2021, May be sent to :

Prof. V.K. Srivastava
Principal, Prasad Institute of Medical Sciences

Address for Correspondence:
Har Nivas
10 Havelock Road, Lucknow-226001, Uttar Pradesh
Mob: +91 9415101095 & Email ID: vinods51@hotmail.com

SECRETARY
IAPSM UPUK – (2019 – 2020)