



Facilitating Cancer Care Through Ayushman Bharat Scheme (PMJAY) in Rural Places of India: A Narrative Review

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Pradhan Mantri Jan Arogya Yojana (PMJAY) also known as Ayushman Bharat or flagship National Health Protection Scheme is funded by the Government of India. The scheme takes into account not only the poor but rural families also, and that is why it is economically beneficial to the poor households in rural and urban areas. Either due to lack of funds or due to paucity of health care facilities at adjacent centres, cancer care in rural areas has always been suboptimal. Poor people are almost always on the verge of facing economic toxicities during cancer diagnosis, treatment or rehabilitation. Despite various available regional and national programs for healthcare in India, lack of insurance scheme was an inseparable problem. Ayushman Bharat scheme provides financial protection for access curative care at secondary and tertiary levels through engagement with both public and private sector. Pradhan Mantri Jan Arogya Yojana (PM-JAY) and Health and Wellness Centres (HWCs) are the two major components. Ayushman Bharat provides India with a great opportunity to improve the quality of health-care delivery by linking reimbursements directly to adherence to evidence-based management guidelines. Newer modalities of radiotherapy, chemotherapy and other biological therapies have been included under this scheme. Removes the burden of out of pocket expenditures. In Spite of multiple benefits PMJAY is not out of fallacies. Paucity of health care services, difficulties with implementation, failure in compensating associated indirect costs are the major drawbacks. Opportunities like delivering affordable and equitable cancer care in India, digitalization, removing heterogeneity across rural and urban India are the future perspectives. To conclude, if PMJAY can overcome these shortcomings, and also incorporate a hospital cash component, it could genuinely claim to be the world's largest and most successful national health protection scheme.

Introduction

India has always strived for a permanent answer for the betterment of its health infrastructure. Due to variable logistic, social, cultural, and most importantly economic hindrances across the country, India has always lagged in building a formidable health care system. Health care in India is largely underpenetrated with Government expenditure at around 3.2% of the GDP (Gross Domestic Product) [1]. From the time of its independence, India's National Health Policy, endorsed by Parliament in 1983 and amended in 2002, has been to improve the health of the population [2]. Previously many insurance policies have been launched by the Government of India, in collaboration with the Ministry of Health and Family Welfare but none of them have been proven to be effective to solve this problem. Pradhan Mantri Jan Arogya Yojana (PMJAY) also known as Ayushman Bharat or flagship National Health Protection Scheme is funded by the Government of India [3]. The scheme takes into account not only the poor but rural families also, and that is why it is economically beneficial to the poor households in rural and urban areas.

Cancer Care

Cancer is the major cause of morbidity and mortality worldwide. The cancer burden varies within the regions of India posing great challenges in its prevention and control.

Epidemiology

As per the National Cancer Registry Programme report, over 13 lakh people in India suffer from cancers every year [4]. Sedentary lifestyles, an increase in urban pollution, in addition to a rise in obesity, and tobacco and alcohol consumption, are said to be the reasons behind the rise. The Indian Council of Medical Research (ICMR) estimates that there will be a 12 percent rise in cancer cases in India in the next five years [5]. The most common forms of cancer affecting the people of India are breast cancer, cervical cancer, and oral cancer. Cancer sites associated with tobacco form 35 to 50% of all cancers in men and about 17% of cancers in women in India [5].

Treatment disparity

Although the disease is almost equally distributed in rural and urban areas, most of the time the rural people fail to come across timely treatment. Either due to lack of funds or due to paucity of health care facilities at adjacent centres, cancer care in rural areas has always been suboptimal. Poor people are almost always in the verge of facing economic toxicities during cancer diagnosis, treatment or rehabilitation. Specialized Onco- surgery, Chemotherapy, Radiotherapy: the most common 3 modalities, required for the treatment of cancer are having suboptimal availability through-out the country, compared to USA or UK. This deficiency becomes more prudent in rural areas. New and higher modality treatments like immunotherapy, targeted therapy, biological therapy, organ or bone marrow transplantation have always been out of the reach because of enormous economic burden. So in every aspect of cancer diagnosis and treatment, palliative or supportive management, an active involvement of the Government was of immense importance.

Lack of insurance scheme

In 2017 Global Burden of Disease Study reported major diseases and risk factors from 1990 to 2016 for every state in India [6]. This study brought a lot of interest in government health policy because it identified major health challenges which the government could address. Despite various available regional and national programs for healthcare in India, there was much more to be done. In India, the Union Government (GOI) has already taken steps to develop hospital insurance with premium subsidization of low-income beneficiaries [7]. In 2008, India's Labour Ministry launched a hospital insurance scheme called Rashtriya Swasthya Bima Yojana (RSBY) covering 'Below Poverty Line' (BPL) households. RSBY is implemented through insurance companies; premiums are subsidized by Union and States governments [8]. Similarly budgetary provisions are made to fund the Rashtriya Arogya Nidhi (RAN) scheme. The Scheme provides for financial assistance to patients, living below poverty line and who is suffering from major life threatening diseases, to receive medical treatment at any of the super specialty Government hospitals or institutes. Although RSBY and RAN has grown rapidly, only a minority of BPL households in India is enrolled so far, and the scheme is yet to achieve presence in all districts of all States, to cover all BPL households all over India. In spite of a meticulous effort, India has suffered from paucity of insurance schemes that cover all the aspects of cancer management. About 86% of rural households and 82% of urban households do not have access to healthcare insurance [9].

Economics

In 2018 the Indian government described that every year, more than six crores Indians were pushed into poverty because of out of pocket medical expenses. While funds have been committed by the Union Government of India (GOI) and at State government levels for the provision of

healthcare services to the entire population, the amounts allocated are insufficient to pay for universal coverage. Consequently, most Indians pay their own medical costs. According to the World Health Organization (WHO), private expenditure represented 73.5 per cent of total health expenditure in India in 2007 [10] public funds covered only 26.5 per cent of total healthcare cost. It has been reported that hospitalization of a person belonging to the lowest monthly expenditure class in rural India cost in 2,530 Rs in a government institution and 5,431 Rs in a private institution [10]. Drugs represented about 49 per cent of total health expenditure. The hospitalisation expenses for critical ailments had shot up by 300 per cent over a decade [11]. An estimated 6 million families sink into poverty each year due to hospitalisation. Unexpected and serious healthcare problems often lead families to debt.

Ayushman Bharat Scheme

Ayushman Bharat Yojana or Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is a fundamental restructuring of the manner in which beneficiaries access healthcare services at the primary, secondary and tertiary levels. It represents a transition from the segmented, sectoral and fragmented program implementation models towards a comprehensive, holistic, need-based healthcare system. It encapsulated a progression towards promotive, preventive, curative, palliative and rehabilitative aspects through access of Health and Wellness Centres (HWCs) at the primary level. It also provides provision of financial protection for access curative care at secondary and tertiary levels through engagement with both public and private sector.

The Ayushman Bharat programme was launched in 2018 to address health issues at all levels - primary, secondary, and tertiary. It has two components:

1. Pradhan Mantri Jan Arogya Yojana (PM-JAY), earlier known as the National Health Protection Scheme (NHPS)
2. Health and Wellness Centres (HWCs)

The HWCs are aimed at improving access to cheap and quality healthcare services at the primary level. PM-JAY will cover the financial protection for availing healthcare services at the secondary and tertiary levels.

Details

1. PMJAY is one of India's most ambitious health sector schemes.
 - a) It was launched as the National Health Protection Mission and renamed later.
 - b) It is the largest government-funded health insurance scheme in the world.
 - c) The scheme offers eligible families an insurance cover of Rs. 5 lakh per annum per family.
 - d) This amount is intended to cover all secondary and most tertiary care expenditures incurred.
 - e) There is no cap on family size and age under the scheme, to ensure that nobody is left behind.
 - f) The cover will include pre and post-hospitalization expenses. It will also cover all pre-existing conditions.

3 days of pre-hospitalization and 15 days of post-hospitalization like medicines and diagnostics are covered.

g) Components of treatment covered under the scheme:

- Medical examination, consultation, and treatment
- Medical consumables and medicines
- Intensive and non-intensive care services
- Medical implant services
- Lab and diagnostic investigations
- Complications arising out of treatment
- Accommodation benefits and food services

h) The beneficiary will also receive a defined transport allowance per hospital.

2. HWCs are being created by converting the existing primary health centres and subcentres. They provide comprehensive primary health care (CPHC) including a child and maternal health services, non-communicable diseases, and also diagnostic services, and free essential drugs. Services offered are:

- a) Pregnancy and child birth care
- b) Neonatal and health care
- c) Childhood and adolescent health care
- d) Family planning, contraceptive and other reproductive health care
- e) Management of communicable diseases
- f) Screening, prevention, control and management of non-communicable diseases
- g) Care of common ophthalmic and ENT problems
- h) Basic oral health care
- i) Elderly and palliative health care services
- j) Emergency Medical Services
- k) Screening and Basic management of Mental health ailments

Ayushman Bharat in cancer care

Oncology has been one of the most used tertiary specialities in PMJAY so far. Lack of knowledge, screening and cancer-care services have impeded the progress. With over 4.70 lakh cancer cases treated under Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana so far, the government is now looking at specialised screening services for cancer in health and wellness centres under the scheme [12]. As on 15 December, 2019 a total of 470,133 cancer cases have been treated under AB-PMJAY, according to the latest data available with National Health Authority (NHA), nodal agency for implementing the scheme [13]. Oncology comprised nine percent of claims submitted, and 34% of all tertiary claims submitted till July 2019 since September 2018 across 26 States and union

territories. Two States (Tamil Nadu and Maharashtra) generated 60% of all Oncology claims in the said period. The number of cases treated under the medical oncology was 3,59,327, paediatric oncology was 17,421, radiation oncology was 76,444 and surgical oncology was 16,941, as per the NHA data [14] Ministry of health and family welfare is also exploring options to provide quality diagnostic services from certified laboratories for screening of diseases to beneficiaries of the scheme under a Public Private Partnership (PPP) model. Ayushman Bharat is closely working with the National Cancer Grid (NCG), a network of major cancer centres across the country, to ensure that those offering cancer surgeries, chemotherapy and radiation therapy and other procedures for cancer under the scheme follow a protocol. The NCG identifies itself as a union of cancer centres in the country which could provide uniform and high standards of cancer care, follow uniform evidence-based guidelines for management of patients. They also develop human resource adequately trained to fulfil the cancer healthcare needs of the entire nation and conduct collaborative clinical research of a high standard. Centres like which are overburdened with patients may get some relief as patients start getting rational and standard care at other centres. It will also reduce cases of delay in treatment. As per the Report of NCRP 2020, cancer registries need to be linked to several other databases (Ayushman Bharat, other insurance schemes, mortality databases, Health Management Information System) both at national and local levels for a seamless improvement of cancer statistics [15]. All India Institute of Medical Sciences has not been behind in implementing PMJAY for cancer care and management. In the academic year or 2021-2022 total 167 (42%) patients have been benefited with the radiotherapy schemes of Ayushman Bharat. CT simulation, thermoplastic cast and treatment delivery with modern intensity modulated radiotherapy techniques have been included within schemes. Similarly 32% of patients in day-care and 40.6% of patients of in-patient care services, have received chemotherapy and targeted therapies under provision of Ayushman Bharat. 31% of patients underwent oncological surgeries under the same scheme. The numbers are self-explanatory and has been significantly rising day by day at our Institute.

Strength

1. Ayushman Bharat provides India with a great opportunity to improve the quality of health-care delivery by linking reimbursements directly to adherence to evidence-based management guidelines. This is particularly important for cancer, for which treatment is more complex and expensive than for other conditions.
2. In Radiotherapy, Ayushman Bharat covers schemes for definitive, adjuvant, neo-adjuvant, palliative intent radiotherapy with advanced techniques like, Intensity Modulated Radiotherapy (IMRT), Image guided radiotherapy (IGRT) for almost all subsites.
3. As different forms of cytotoxic therapies play key role in the management of cancers, chemotherapy, targeted therapy, hormonal therapy and few forms of immunotherapies are covered under different schemes of Ayushman Bharat.
4. Such enhancement of the coverage could make the scheme truly pro-poor, and more effective in protecting the nation's underprivileged. And, considering that this added benefit would be conditional on prior hospitalisation, there is no risk of moral hazard or unwarranted claims.
5. The scheme provides those in need to get secondary healthcare benefits offered by specialists like surgical, radiation and medical oncologists. Moreover advanced medical treatments of cancers are also covered.
6. Removes the burden of out of pocket expenditures. PMJAY aims to make the entire process of paying for healthcare cashless. Additionally PMJAY beneficiaries can seek treatment across India.
7. All public and empanelled private hospitals have been directed to not charge any extra payment for medical care from all PMJAY beneficiaries to reduce corruption or delay in services.

8. The scheme improves quality of life of the weaker sections of the society by ensuring, they get timely care and finances to tackle their health issues.

9. PMJAY is destined to build better infrastructure development in rural and under-served areas across the country and lead to more and more Indians having access to healthcare. The Government has created 1350 medical packages that cover day-care treatment, surgery, hospitalisation, cost of diagnosis and medicines with PMJAY health cover [11].

Weakness

1. Although the current data suggests significant coverage, these numbers are concerning because they show that 70% of publicly funded treatment was spent on drugs. Of the 1575 hospitals in which cancer treatment will be reimbursed by this scheme, only 438 actually have multidisciplinary care with available medical oncology, radiation, and surgical services [8].

2. Paucity of health care services at rural areas makes the situation even more difficult, as studies have shown that there is a significant difference in interval between disease onset and first visit to the health care system, between rural and urban areas.

3. Since health is a state subject, Ayushman Bharat has not yet been implemented in a few of the states like Telangana, Delhi, West Bengal and Odisha. States like West Bengal and Odisha have their health insurance policy called Swasth Sathi and Biju Swasthya Kalyan Yojana. Therefore, implementing the Ayushman Bharat scheme across the country is a big challenge.

4. Although the health scheme is important because it helps patients cover the costs of medical care, this is not a long-term solution. Ideally, the scheme should include mechanisms to strengthen public health-care infrastructure especially in rural areas. The infusion of Ayushman Bharat funds into participating public hospitals is welcome. However, in isolation these funds are not sufficient to meaningfully improve the hospital infrastructure and quality of care provided to all patients.

5. Ayushman Bharat fails to recognize and compensate the indirect costs associated with hospitalization, and these are not negligible for the poor.

Opportunities

1. Delivering affordable and equitable cancer care in India will require substantial changes to demand and supply-side policies. This includes better price negotiation for all technologies, developing health technology assessment mechanisms, identifying costs across whole pathways, developing new and context-appropriate models of care, and strengthening governance of clinical practice in both public and private sectors. India needs to revisit and revise its national cancer control programme with a focus on better overall care, not just access to new technologies.

2. As digitalization play a crucial role for the functioning of cancer registry and still in India the registry coverage is very low. Thus we believe that the national cancer registry programme should be integrated with Ayushman Bharat Digital Mission (ABDM) to strengthen the process of cancer registration across the country.

3. For an efficient health system, it needs to be decided if the extra cost being incurred is justified to achieve the extra health gains. In this regard, health technology assessment (HTA) helps to make evidence informed decisions by evaluating relative cost and benefits of the available interventions. Economic evidence generated by HTA can also be used in framing standard treatment guidelines (STGs) for high-cost cancer care.

4. There is heterogeneity across individuals, including in the same patient group, and over different

contexts and circumstances that should be considered while simultaneously seeking to understand commonalities to develop a blueprint for value-based care. Sources of patient heterogeneity that demands examination are demographics, preferences and clinical factors (e.g. severity of disease, disease history and genetic profile).

5. 60 per cent people live in villages and there is no facility for cancer testing.(4) Primary Health Centre (PHC) and Community Health Centre (CHC) should hold monthly camp for early detection of cancer for timely treatment as treating the disease gets difficult in stage two or three. These will boost up to the efficiency of Ayushman Bharat.

Threat

1. There is a pressing need to improve its outreach, as millions of deserving citizens remain excluded because of the enrolment criteria, or they are not well-informed about this insurance, and sometimes due to limited administrative infrastructure.
2. Some private hospitals insist on an upfront payment, which they promise to reimburse only after the government pays for the treatment. This defeats the cashless feature of PMJAY.
3. Inadvertent and dishonest use of these schemes by means of indenting multiple unwanted drugs for single patient may outburst the total expenses without need. Needs proper monitoring and surveillances to rule out chance of these unfair means.

In conclusion, if PMJAY can overcome these shortcomings, and also incorporate a hospital cash component, it could genuinely claim to be the world's largest and most successful national health protection scheme. The treatment for this disease needs to undergo a treatment plan and some approvals like a 'tumour board concept' to decide the best patient management. To rule out the treatment heterogeneities in rural and urban India, the Government should come out with meticulous planning and treatment coverage ideas with future advancements to achieve the sustainable goal.

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