

Cancer Care in India

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CANCER BURDEN IN INDIA

As per a recent report from the National Cancer Registry Program (NCRP), there are more than 4.5 million cancer patients in India. Each year, approximately 1.5 million new cancer patients get registered and there are about 780,000 cancer-related deaths. Thus, cancer is the second common cause of death in India. The same study estimated that the cancer incidence in females would be more than in males for the year 2020; 103.6 vs 94.1 per 100,000, respectively. Alarming, one in nine Indians is at risk of developing cancer during their lifetime.¹

The top-five cancers in India in males include cancer of the lung, mouth, prostate, tongue, and stomach (constituting about 36% of all cancers) and in females include cancer of the breast, cervix uteri, ovary, corpus uteri, and lung (accounting to about 53% of all cancers). Nearly 30% of cancers in India can be attributed to tobacco use (used by over 275 million people in India), commonest being cancers of the oral cavity.^{1,2} As high as 70% of cancers in India can be prevented by controlling potential risk factors such as tobacco consumption, air pollution, sanitation and personal hygiene, healthy lifestyle, awareness of cancer, etc. There are high incidence pockets of some cancers in certain geographical areas, for example, gallbladder cancer in the northern Gangetic belt (one of the highest incidence areas in the World), esophageal cancer in Northeast region, colon cancer in Goa, stomach cancer in southern and Northeast India.

It is estimated that in next 30 years, the number of cancer patients in India is likely to double. This is attributed chiefly to our rising population, diagnostic facilities and reach, and increasing lifespan and not merely to increase in incidence of cancer. The rapid urbanization, changing lifestyle, and food habits also contribute to rising cases of cancer in the society.

Cancer Care Delivery

Compared to the developed nations, cases of cancer detected in India are low, but mortality rate is high. India has the lowest 5-year survival rates for most cancers compared to other neighboring Asian countries such as China² and the results are dismal when compared to North America and Europe (30% vs 60%, respectively).³ Unfortunately, a large majority of patients with cancer in India are still detected in a locally advanced stage and statistics reveal it to be approximately 57.0% for breast, 60.0% for cervix uteri, 66.6% for head and neck, and 50.8% for stomach cancer.¹ Poor access to healthcare facilities in rural areas coupled with socioeconomic factors and lack of awareness about the disease result in delayed diagnosis and treatment and hence poor prognosis underscoring the need to “Close the Care Gap”—this year’s theme of the World Cancer Day 2022, UICC.⁴

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Tertiary Cancer Centers (TCCs) are a handful of premier hospital care facilities housed in major tier I cities of urban India with state-of-art infrastructure, manpower and technology. Many TCCs (not all) have a comprehensive team of professionals comprising medical, radiation, and surgical oncologists; pain and palliative care experts; and auxiliary services, for example, diagnostics and pathological tests. Accessing healthcare in these facilities is an arduous task especially for those from rural India, as families have to travel a long distance to reach a TCC. Further, long waiting lists at these centers, lack of place to stay, long time taken for investigations, limited finances, language and cultural differences often lead to incomplete treatments and dropouts.

Cancer diagnosis and treatment has disastrous monetary impact on an average/poor Indian family. Approximately over 50% of the costs of cancer treatment has to be an out-of-pocket expenditure even for patients seeking treatment in a government setup. With practically no insurance cover, people from rural background heavily rely on borrowings from friends and relatives, selling their limited assets such as jewelry/agricultural land/animals and this, at times, may exceed 20% of their annual per capita household expenditure. As a consequence, the socioeconomically weaker sections of the society often seek local treatment from un- and semi-qualified “doctors” with catastrophic consequences as very often early (curable) cancers are made incurable by inappropriate treatment with no reliable treatment records, operative findings or even a histopathology available for review. The glaring examples include lumpectomy for breast cancer and laparoscopic cholecystectomy for gallbladder cancer with no regard to stage, margins, adjuvant treatment or follow-up. As a result, most of these patients land up in TCC with recurrent cancer (often without a biopsy/histopathology report) when nothing much can be offered.

Hence, in India, more emphasis has to be paid on government insurance schemes covering the poor, more accessible and well-equipped cancer hospitals in tier II and III cities and strengthening the community health network in rural areas; the latter has been

immensely successful in implementing vaccination and other maternal and child health welfare activities in rural India. Various schemes such as the Ayushman Bharat Yojana, also known as the Pradhan Mantri Jan Arogya Yojana (PMJAY), launched recently by the Prime Minister of India, Shri Narendra Modi, is presently providing a cover of Rs.5 lakh per family and is one of the largest among the many such state-and central government-funded welfare schemes.⁵

Major steps have been taken by the Government of India (GOI) to “Close the Care Gap” by creating healthcare framework for its population and that includes starting National Cancer Control Programme (NCCP) way back in 1975–1976 and NCRP in 1981. The GOI continues to make efforts in the right direction expanding in to population-based cancer screening in selected areas, a brief of which is presented in the following.

National Cancer Control Programme (NCCP)⁶

National Cancer Control Programme was launched by the GOI in 1975–1976 with the vision for strengthening the premier cancer hospital/institutions by sanctioning grants for purchase of radiotherapy cobalt machines. District Cancer Control Programme (DCCP) was started in selected districts (near the medical college hospitals) in 1990–1991. The programme was evaluated by National Institute of Health and Family Welfare, New Delhi in 2004 and was further revised in 2005. Overall, NCCP has the following goals and objectives:

- *Primary prevention* of cancers by creating awareness against consumption of carcinogenic products especially tobacco and the importance of genital hygiene in reducing the risk of cervical cancer.
- *Secondary prevention* implies detecting cancers early by screening using simple tools, such as for cancers of cervix, breast, and oropharynx.
- *Strengthening of existing cancer treatment facilities.*
- *Palliative care* for those in terminal stage of cancer.

National Cancer Control Programme also provides for establishment of new Regional Cancer Centers (RCCs), strengthening of existing ones, development of Oncology Wing in Government Hospitals and Government Medical Colleges and establishing DCCP (implemented by a nodal agency, which may be a RCC or Government Medical College or Government Hospital with radiotherapy facility) to enhance the cancer treatment facilities across the country and reduce the geographical gap in the country in the availability of cancer care facilities.

District Cancer Control Programme (DCCP)

The DCCP was launched in the year 1991 initially covering only a few districts. The aim is to reach the doorstep of every remote village in the district where adequate healthcare/cancer care facilities are not available. Emphasis is to educate the rural community regarding prevention, early detection by creating awareness about early symptoms of cancer, importance of cleanliness and personal hygiene, healthy living, harmful effects of tobacco consumption, etc. The DCCP are in place in 28 districts at present in India.

The district projects have focus areas that may be subdivided as follows: (1) Health education, (2) Early detection, (3) Training of medical and para-medical personnel, (4) Palliative treatment and pain relief, and (5) Coordination and monitoring.

National Cancer Registry Programme (NCRP)

The Indian Council of Medical Research (ICMR) started the NCRP in December 1981 to collect and analyze data on cancer incidence, prevalence mortality, and trends over time, etc. across India. It functions through two types of registries: Population Based Cancer Registry (PBCRs) and Hospital Based Cancer Registries, which were started in January 1982. The PBCRs take the sample population in a geographically defined area while the Hospital-based registries take the data from patients coming to a particular health institution.

Currently, there are 29 PBCRs and 58 hospital-based cancer registries in India. In 2001, data from all cancer registries and all medical colleges were collated for the “Development of an Atlas of Cancer in India” (www.canceratlas.india.org) to have an idea of patterns of cancers in several other parts of the country, including those not covered under the NCRP.

National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS)⁷

In India, 60% of all deaths are attributed to non-communicable diseases (NCDs) such as cardiovascular diseases (CVD), Cancer, Chronic Respiratory Diseases, and Diabetes. Under the National Health Mission, the GOI has been running NPCDCS since 2010 and has expanded from 100 to about 468 districts in 2012. In May 2013, World Health Organization finalized a Global Action Plan and Monitoring framework to prevent and control NCDs. India became the first country to adopt the National Action Plan in Country's context with 10 targets and 21 indicators.

Estimates suggest that almost 52% of all conditions can be managed at the primary care level. Hence, to ensure comprehensive primary health care, close to where people live, GOI has already laid a framework wherein Sub-centers (SC) would be strengthened as Health and Wellness Centres (HWC), staffed by appropriately trained primary health care team. The Medical Officer of the Primary Health Centre (PHC) would oversee the functioning of the SC/HWC that falls in that area. Operational guidelines have been developed to guide risk assessment, screening, referral, and follow-up for selected NCDs among all women and men aged 30 years and above, as a part of services being offered in comprehensive primary health care.

Among its newest initiatives, population-based screening (PBS) for NCDs, namely, diabetes, hypertension, and common cancers (oral, breast, and cervix) has been expanded to more than 400 districts. Screening is being provided through trained frontline workers [Accredited Social Health Activist (ASHA) and Auxiliary Nurse-Midwife (ANM)] and suspected cases are referred to Medical Officers at PHC. Concerned ANMs, Lady Health Visitor (LHV), Staff Nurses, and mid-level providers would be trained in Oral Visual Examination and Clinical Breast Examination. They would also be trained in Visual Inspection using Acetic Acid (VIA) for cervical cancer screening. Screening for cancers will take place once in 5 years, and for hypertension and diabetes it would be done annually. For cancers of the oral cavity and breast, the first level of referral is the Community Health Center (CHC)/Sub-district/Sub-divisional Hospital (SDH)/District hospital (DH) and then to the DH for a biopsy for confirmed cases. For cervical cancer, the CHC would offer colposcopy, wherever possible, for those that are VIA positive and cannot be managed by cryotherapy at the level of the

PHC. The biopsy cases would need to be referred to the DH, or to the nearest TCC. Management and treatment of cancers above the level of the PHC will be dealt with in the Operational Framework for cancer screening and management.

On a fixed day in a week, in village or SC-based place, depending upon the distance/terrain, the ANM, assisted by the ASHA and members of the Village Health, Sanitation, and Nutrition Committees (VHSNC), would screen for hypertension, diabetes mellitus, and oral cancers, cervical cancer (SC or above), and breast cancer. The target population for screening will include all men and women over 30 years for oral cancer, hypertension, and diabetes mellitus; and all women over 30 years for cervical and breast cancer.

Till March 2020, there are 665 District NCD Cells, 637 District NCD Clinics, 4,472 CHC NCD Clinics, 181 Cardiac Care Units, and 218 Day Care Units functional in the country.

CONCLUSION

The fragmented public healthcare system in India needs to be organized and channelized to reach every doorstep spreading awareness about cancer and its early diagnosis. Making cancer care affordable is another monumental task that requires aggressive cover to the most weak and vulnerable of the population through government-funded insurance schemes. Including cancer as a notifiable disease and linking it with popular schemes such as Ayushman Bharat and the Hospital Information Systems of TCC/RCC would help improve cancer data collection, analysis, modifications, and implementation of new schemes.

The challenges thus are many and gaps in universal healthcare are humongous but not insurmountable.

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