

The Burden of Non-Communicable Diseases (NCDs), with an Emphasis on Cancer Care in India: A Narrative Review

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Purpose: The goal of this review study is to understand the effects of Non-Communicable Diseases (NCDs), with a focus on cancer illnesses. Cancer is growing as a global problem for public health, as well as a big issue in India. This study also focuses on the government-sponsored cancer care programs, which are designed primarily for the underprivileged and financially vulnerable segments of our community in our nation.

Methodology: This review includes research papers that were published between 2011 and 2025. For this review, ten full-text research papers, few government journals have been selected. PubMed, Google Scholar search engines were used as a preliminary search tool to correct locate research papers. The majority of the NCDs that are related to cancer in India were the subject of our scoping assessment.

Findings: Based on the study it was determined that 14.6 lakh cancer cases (crude rate: 100.4 per 100,000) were occurred in our nation in 2025. In India, around one in nine individuals will face cancer at some point in their lives. In India, Non-Communicable Diseases (NCDs) contribute to 60% of all deaths out of that cancer shares 12%.

Originality: It is necessary to streamline and channel India's disjointed public healthcare system to reach every home and raise awareness of cancer and early diagnosis.

Keywords: non-communicable diseases (NCDs), cancer, burden, india

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1. Introduction

Chronic diseases, sometimes referred to as Non-Communicable Diseases (NCDs) (Menon et al., 2022), are not contagious. They progress slowly and last for a long time. NCDs are not communicable because they never-ever responsible for any (acute) infectious process.

They never go away on their own and take a long time to address. The four primary categories of non-communicable diseases include diabetes, cancer, chronic respiratory conditions including asthma and persistent obstructive lung disease, and cardiovascular disorders that causes congestive heart failure and strokes. In India, NCDs currently constitute the main cause of premature death and disability. They rank higher than communicable diseases, maternal, prenatal, and nutritional problems as the major cause of death, contributing for more than 60% of premature mortality (WHO 2014) (Chatterjee et al., 2016) as shown in Figure 1.

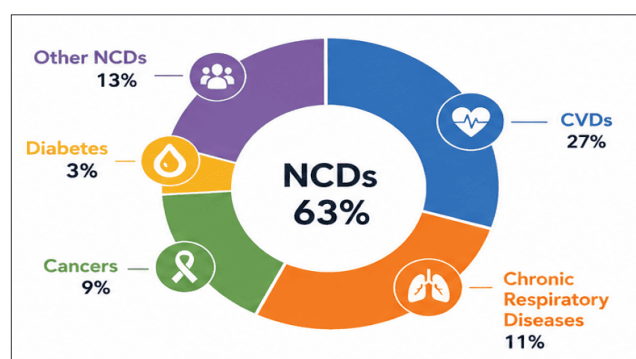


Figure 1: Non-Communicable Diseases (NCDs)

NCDs remain a major health issue in India, where they account for a considerable proportion of deaths and morbidity. The main factors contributing to the trend toward non-communicable diseases are changes in the population, changes in lifestyle, and an increase in the rate of urbanization. The death rate from NCDs is higher in low- and middle-income nations, as well among low-income individuals in fully developed countries, NCDs provide a significant obstacle to lowering national and worldwide health disparities. Of the 55 million fatalities that took place worldwide in 2019, almost 41 million (71%) were caused by NCDs (Menon et al., 2022).

Launched in India in 2011, the National Program for Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) sought to prevent and control NCDs (Rath & Gandhi, 2014) through community involvement, opportunistic NCD screening,

communication about behavioural changes, and NCD services provided through public health services. In spite of this, India does not use public health services very frequently. A ratio of out-of-pocket expenditure to overall health expenditure remained constant between 2004 (71%) and 2014 (69%) (Nair et al., 2013). Top five cancers in India for men are lung, mouth, prostate, tongue, and stomach (about 36% of all cancers); for women, the top five are breast, cervix uteri, ovary, corpus uteri, and lung (almost 53% of all cancers) (Sathishkumar et al., 2022). Over 275 million Indians smoke cigarettes, which is responsible for overall 30% of cancerous cases in the country. The most frequent kind of cancer is oral cancer. By lowering or eliminating hazards such as smoking, air pollution, poor personal hygiene and sanitation, leading a healthy lifestyle, and cancer awareness, among others, up to 70% of cancer illness in India can be averted. In the next 30 years, there will likely be a greater than twofold rise in the cancer patients in India (Ramesh & Kosalram, 2023). This is mostly due to factors like our growing population, expanding diagnostic capabilities, longer life expectancy, and not just a rise in cancer incidence. The country's rising cancer case count can also be attributed to the fast urbanization, dietary changes, and altered lifestyle (Rath & Gandhi, 2014).

Over the years, the Indian government has made concerted efforts to combat cancer, implementing various initiatives and schemes. However, these endeavors, unfortunately, fell short of achieving the desired outcomes. Nevertheless, the government's commitment to improving public health remained unwavering, and valuable lessons were learned from past experiences. Taking these lessons to heart, the Government of India recognized the need to strengthen healthcare at the grassroots level (*Status of Non-Communicable Diseases (NCDs) in India*, n.d.). This realization led to the inception of the Ayushman Bharat initiative in 2018, which aimed to tackle health challenges comprehensively at every level of care. The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) introduced a groundbreaking model encompassing primary, intermediate, and advanced healthcare services (Sharma, n.d.). The AB-PMJAY initiative reimagined the healthcare service delivery model for beneficiaries. Its primary objective is to provide holistic healthcare solutions and ensure that no individual is deprived of necessary medical attention.

By targeting every levels of care, the initiative aims to create a robust foundation to combat health issues effectively. Under Ayushman Bharat, a wide range of healthcare services is offered to beneficiaries. This includes essential primary care services, specialized secondary care, and advanced tertiary care. By addressing the diverse needs of the population, the initiative promotes comprehensive well-being and access to crucial medical interventions (Sinha et al., 2023).

At the grassroots level, primary care plays a pivotal role in preventing, diagnosing, and managing various health conditions. Ayushman Bharat emphasizes strengthening primary care facilities and enhancing their reach to ensure individuals receive prompt and effective medical attention when needed. In instances where specialized medical interventions are required, Ayushman Bharat ensures that individuals have access to a vast network of secondary care providers (Tewari, 2022). This allows for timely referrals and enables efficient treatment for complex health issues, contributing to improved health outcomes for beneficiaries. For severe and critical health conditions that demand advanced medical expertise and infrastructure, Ayushman Bharat extends its support. Beneficiaries can access tertiary care services, ensuring they receive the best possible treatment for complex ailments. This ensures that even the most challenging health circumstances can be met with skilled care and expertise. It signifies a change from the fragmented, sectoral, and segregated program implementation paradigms to a comprehensive, need-based healthcare system that is holistic and inclusive. It represented a shift toward primary level access to Health and Wellness Centers (HWCs) for promotive, preventative, curative, palliative, and rehabilitative elements (*Status of Non-Communicable Diseases (NCDs) in India*, n.d.) (Upadhyay, 2012). Additionally, it offers financial security for secondary and tertiary patients seeking curative care through partnerships with the public and private sectors.

It is made up of two major parts:

1. PM-JAY formerly known as the National Health Protection Scheme (NHPS) (Sharma, n.d.)(Sinha et al., 2023).
2. Health and Wellness Centers (HWCs)(Srinivas et al., 2025).

The major goal of the HWCs is to increase primary level access to affordable, high-quality healthcare services. The financial protection for obtaining intermediate and advanced healthcare services would be covered under PM-JAY.

2. Methodology

Understanding the corpus of research on the prevalence of NCDs in India was the goal of this scoping review. This review includes research that was published between 2011 and 2025. For this review, ten full-text research papers and few government journals have been selected. A preliminary search was done utilizing search engines such as PubMed, Google Scholar to locate papers. The majority of the NCDs that are connected to cancer in India were the subject of our scoping assessment. The amount of evidence in India has been evaluated using the scoping review technique.

A combination of keywords, including Non-Communicable Diseases, NCD, risk factors, India, prevalence, tobacco, cancer burden, Ayushman Bharat, cancer care in India was used to conduct a thorough PubMed & Google Scholar literature search. After evaluating the titles and abstracts of several results this search returned, those that were obviously irrelevant were removed. The remaining publications' abstracts and whole papers were examined to determine which ones met the requirements for inclusion. The flow chart for the paper selection is done as shown in Figure 2.

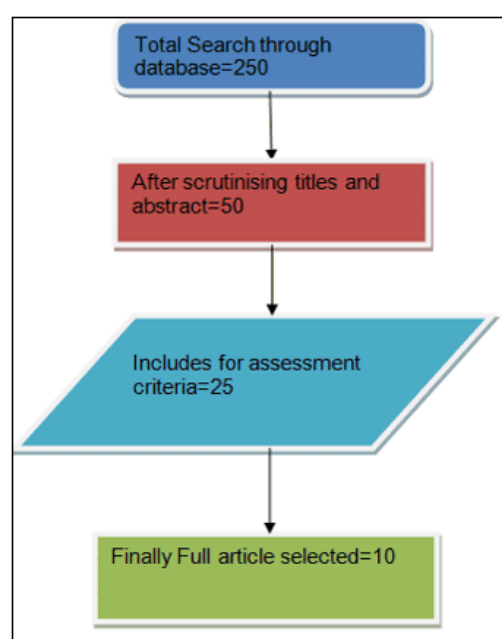


Figure 2: Showing flowchart for articles selection for this review article

3. Findings

There are more than 4.5 million cancer patients in India, according to a recent National Cancer Registry Program (NCRP) report. An estimated 1.5 million new cases of cancer are documented annually, and 780,000 people die from cancer-related causes. 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. The broad category of illnesses known as Non-Communicable Diseases (NCDs) includes malignant growths (cancer), diabetes, respiratory disorders (such as asthma and COPD), and congestive heart failure (such as stroke and respiratory failures) (Nandita Krishnan, Hunter Green, Jinkook Lee, David Flood, Kavita Singh, T V Sekher, David E Bloom, 2025). Because NCDs have a significantly higher death rate in low- and middle-income nations, they provide a significant obstacle to closing the gap in health between developing and developed countries. Every year, 14.6 lakh new cases are diagnosed with cancer, and at any given moment, there are about 28 lakh active cases. Every year, it also claims the lives of over 6.8 lakh patients. The World Health Organization (WHO) predicts that by 2030, there would be 13.1 million cancer-related deaths in India (Ramesh & Kosalram, 2023). Given the effects of smoking and other risk factors, changing demographics, longer life expectancies, and other factors, it is anticipated that the cancer burden will continue to rise. As per World Health Organization (WHO), 13.1 million more Indians are expected to die from cancer incidents by 2030 (Mohan, 2025). Given the effects of tobacco use and other risk factors, demographic shifts, longer life expectancies, and other factors, it is anticipated that the burden of cancer will continue to rise. As of December 15, 2019, the National Health Authority (NHA), the program's nodal body, has data that shows that 470,133 cancer cases had been treated under AB-PMJAY. According to NHA data, the number of cases treated under medical oncology was 3,59,327, under pediatric oncology it was 17,421, under radiation oncology it was 76,444, and under surgical oncology it was 16,941 (Sharma, n.d.). Under AB-PMJAY, the NHA recently signed a memorandum of understanding (MoU) to develop standardized patient care standards.

Early identification and beginning of proper treatment improves patient survival and lowers treatment costs. According to the statistics, over 46% of cancer patients were detected in the second or earlier stages, while around 18% were in the third or higher stages. At the time of diagnosis, 37.3% of patients did not know the stage of their cancer (Shrivastav et al., 2023). Around 18% of cancer patients have reported postponing therapy even after being diagnosed. Financial difficulties were cited by around 27% of those who delayed treatment decisions.

4. Interpretations and Conclusion

Lack of skilled healthcare workers, inadequate knowledge and abilities of primary care providers, and unclear roles for the public, private, and volunteer sectors in healthcare delivery have all contributed to the rising burden of non-communicable illnesses. Community empowerment through effective health education, the deployment of trained public health professionals, the provision of free health care, and social insurance would be ideal in order to successfully control the rising prevalence of NCDs. In India, the incidence burden of cancer is still rising. Breast cancer ranked highest among the five most common cancers in women, followed by cancers of the cervix, ovary, and corpus uteri. In men, the lips, tongue, and lungs were the only three areas where tobacco-related malignancies were found. Reducing the future cancer burden requires taking a preventative action. The updated estimates are useful for early diagnosis, risk reduction, and management initiatives related to cancer prevention and control in India. However, appropriate research is required to explore the causes of the cancer burden more thoroughly and offer cost-effective treatments. A government project called the National Cancer Grid (NCG) aims to connect cancer centers, research centers, patient associations, and nonprofit organizations throughout India. The goal of the MoU is to improve cancer screening and treatment. Promoting evidence-based clinical practice and appropriate technology use is important at all health care levels, even tertiary services.

In addition to taking proactive measures at the individual and community levels, the government should think about strategic investments and efforts to prevent and regulate Non-Communicable Diseases (NCDs) especially to cancer and their risk factors. Primary prevention measures should include screening and improved diagnostic facilities, better management capabilities, and universal access to healthcare services that covers several needy populations. A strong surveillance system, coordinated management, and a nationwide public awareness campaign are necessary for the program's success and for the services to be widely accessible.

The financial hardship that cancer patients, especially the impoverished face have been amply demonstrated in this study. To alleviate the financial strain on impoverished families, it is imperative to establish an efficient referral system and a means of delivering free diagnosis, treatment, and reimbursement for the impoverished patients' travel expenditures. The majority of common cancers may be prevented; hence it is crucial to increase community-based cancer control initiatives. It's time to put evidence-based cancer prevention, early detection, and patient care techniques into practice.

Many advances have been made in our nation, and the government's numerous programs and initiatives over the years have substantially closed the geographic disparities in the treatment facilities. We still have more work to do.

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