

Introduction

In India, the number of new cases of cancer was estimated to be 1.39 million in 2020 [1]. Globally, cancer is among the leading causes of death, contributing to about 10 million deaths during 2020[2]. India exhibits a wide heterogeneity in the geographic incidence of cancer. According to the recent report of the National Cancer Registry Programme of 2020, the cancer incidence rates in Aizawl district were about seven times higher than the rates in Osmanabad district [1].

The rising cancer incidence is bound to exert a tremendous strain on people and the health systems, which may be least prepared to manage this burden. Cancer registries play a crucial role in cancer prevention and control by generating systematic and timely information on new cases of cancer, which enable health system preparedness and framing of programmes and policies.

Cancer has a unique course, and control can be achieved through providing information to the general population on trends in the occurrence, profile and distribution of cancer cases. The Ministry of Health and Family Welfare (MoHFW) has developed several legislations, policies and programmes to enable and strengthen cancer prevention and control.

Present Status/policies/Programmes

The National Health Policy (NHP) 2017 focuses and commits itself to prevention, early diagnosis and treatment for all Noncommunicable Diseases (NCDs'), including cancer [3].

The cancer component under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS) focuses on [4]

1. Primary prevention through information, education and communication (IEC) and Behavioural Change Communication (BCC)
2. Secondary prevention, through early detection and diagnosis of common cancers like cervix, oral cancers and breast cancers.
3. Tertiary prevention by means of strengthening of provision of cancer care, including palliative care at the existing institutions and setting up of new institutions.

Strengthening existing regional cancer centres, oncology wings with the availability of cancer treatment facilities, and assistance to NGOs working in cancer are some of the initiatives that are part of this scheme.

The National Cancer Registry Programme

Cancer Registry aims for systematic collection, storage, analysis, interpretation and reporting of patients diagnosed with cancer. They provide an opportunity to adequately assess the extent and nature of the cancer burden in society. The ability to distinguish individuals by events (e.g., hospital admissions) is a vital feature of a cancer registry. The records of cancer patients are appropriately identified in a registry so that case abstraction can be performed.

The National Cancer Registry Programme (NCRP) under the Indian Council of Medical Research (ICMR) has successfully collected cancer data since 1981. NCRP is coordinated by the **ICMR-National Centre for Disease Informatics and Research**, Bengaluru. The NCRP collects the

data on cancer incidence, mortality, pattern, trend and geo-pathological distribution of cancers. It also helps to formulate and implement policies and programmes, monitor and evaluate the cancer control activities. NCRP started with a network of three PBCRs in Bengaluru, Chennai and Mumbai and three HBCRs at Chandigarh, Dibrugarh and Thiruvananthapuram. The registries have expanded into a vibrant network of 38 PBCRs and 269 HBCRs registered under NCRP. There are two types of cancer registry: hospital-based and population based.

The Hospital Based Cancer Registries (HBCRs) record information on cancer patients attending a particular hospital, focusing on clinical care, treatment and outcome. Their primary purpose is to contribute to patient care and administrative management, although they may be helpful to a certain extent for epidemiological purposes. Population Based Cancer Registries (PBCRs) record all the new cancer cases occurring in a defined population within a geographic area. Cancer Atlas approaches have also been used for specific short-term purposes.

Functioning of Hospital Based Cancer Registry

A Hospital Based Cancer Registry scientifically collates data on all confirmed malignancy cases from all departments and units where any cancer is diagnosed or treated in the hospital. Interdepartmental cooperation is a predominant feature of such a registry, as shown in Fig 1.

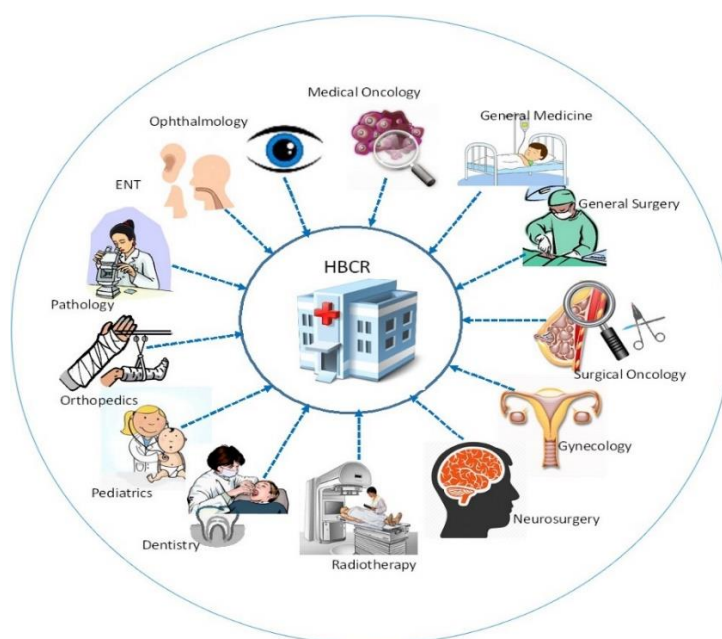


Fig 1 – Key departments providing information to HBCR

The information collected on a standardised core form is entered into a software-based computer for transmission to ICMR- NCDIR, Bengaluru. Over the years, the registries and the office of the NCRP have employed advanced electronic information technology for data entry, data checks and verification for duplicates. The software applications have advanced over the years to provide robust support for data submission. The data quality is assessed for different dimensions like validity, comparability, timeliness and completeness. Frequent training and

refresher programs are conducted for cancer registry investigators and staff to enhance sustain the quality of registry work (Fig. 2).

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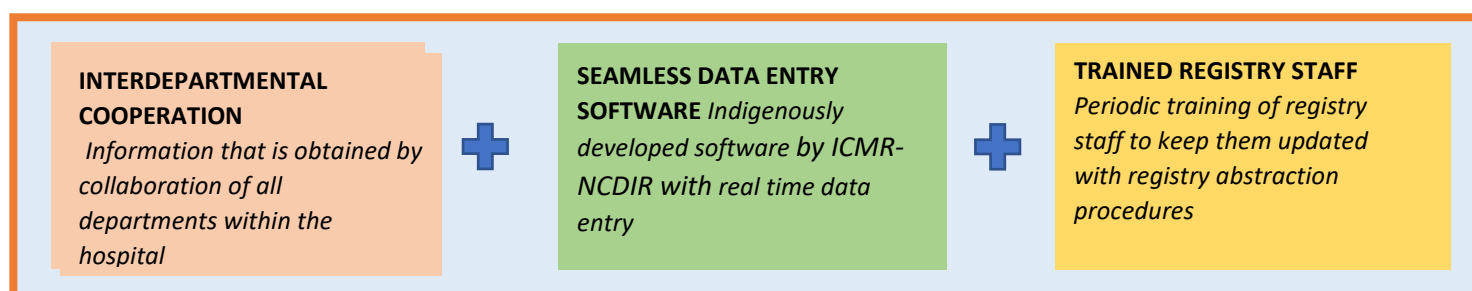


Figure 2 - Features of a Hospital Based Cancer Registry

About this Report

This report " Clinicopathological Profile of Cancers in India: A Report of the Hospital Based Cancer Registries, 2021" consolidates the data collected during the period 2012-19 across 96 Hospital Based Cancer Registries under National Cancer Registry Programme. The data pertains to all diagnosed and treated cases of confirmed malignancies reported to these centres across the country. Registries whose data sets were complete and finalised have been included for the referenced period. These HBCRs are usually located in specialised oncology centres / general or multi-speciality hospitals (public & private) of the respective urban/ rural population.

This report addresses the needs of clinicians, researchers, health professionals, policymakers, and those who would like to obtain and use cancer statistics. The aim is to give an idea regarding types of treatment administered to cancer patients in various stages of cancer, emphasising which organ site is the origin of the disease (primary site of cancer).

The hospitals/centres which have contributed data to this report have been divided into groups and given zone-wise categorisation. The hospital-based data collected has been divided into six zones depending on the hospital's geographical location, which has contributed to the data. This is done for the ease of locating the hospital in the zone. Key findings of each chapter are mentioned at the end of each chapter.

A total of 1332207 cancer cases were recorded from the 96 hospitals during the period 2012-19. The data of 610084 cases, for which complete details are available, were included for analysis