

Indian cancer statistics, a model to be followed

In India, around 555 000 people died of cancer in 2010, according to estimates published in *The Lancet* today ⁽¹⁾ (March 28, 2012). The study, led by [Dr Prabhat Jha](#), the Director of the [Centre for Global Health Research](#) at St. Michael's Hospital, Toronto, in a collaboration with Indian national institutions and the [International Agency for Research on Cancer \(IARC\)](#), used a unique method of projecting cancer deaths for the whole of India based on the patterns of cancer mortality in 2000-2003 in a sample of households. Cancer mortality is a key measure of the cancer burden in a given country and provides an important basis for implementing public health preventive measures.

India is the first of the emerging economies to join IARC in 2006, and is an active Participating State of the global cancer research agency.

This landmark study, as well as providing a unique snapshot of the current Indian situation with respect to cancer mortality, paves the way for other emerging economies to implement similar systems in settings where the civil death registration systems (CRS) are either non-existent or too weak to provide reliable information on the numbers and causes of deaths.

An innovative registration system

Cancer deaths were identified by trained social workers and doctors in a nationally representative sample of 1.5 million households which constitutes the Sample Registration System (SRS) for projecting births and deaths in India. They estimated cancer deaths among urban and rural populations, less and more educated people, and in different states of India using this approach.

Incidence and mortality

Whereas reliable information on new cancer cases is provided by the population-based cancer registries in India and forms the basis for the national incidence estimates available in IARC's [GLOBOCAN](#) database, reliable information on cancer deaths in the country is now provided by the study by Jha and colleagues.

New statistics to improve cancer control in India

In this study, tobacco-related cancers represented around 42% of male and 18% of female cancer deaths. In men, two of the most common fatal cancers were oral (including lip and pharynx) and lung. "A priority for cancer prevention is tobacco control, particularly through higher taxation of tobacco products to increase the low levels of cessation", said [Dr Freddie Bray](#), the collaborating IARC scientist. Cervical, stomach and breast cancers accounted for 41% of cancer deaths in women in rural and urban areas. Thus, interventions such as tobacco control, human papillomavirus (HPV) vaccination, cervical cancer screening alongside early detection and treatment of oral and breast cancer can have a substantial impact in India in averting future cancer deaths.

Geographic disparities

Contrary to a commonly-held perception, rates of cancer deaths were generally similar between the rural and urban areas of India. However, the cancer mortality rates varied greatly between the Indian states.

Flaws in the current civil death registration system

The cancer death statistics documented by the CRS in many countries, including India, is incomplete and less reliable. IARC's [Dr Rengaswamy Sankaranarayanan](#) reports in an accompanying [Lancet Comment](#) that only half of the estimated 9.8 million deaths per year are captured by the CRS in India, fewer than 4% are medically certified, while more than 75% of deaths occur at home.

A landmark study

[Dr Christopher Wild](#), IARC Director, concluded: "This study should stimulate further interventions to substantially decrease the cancer burden in India. The unique profile of the cancer mortality situation provided by the SRS statistics complements the GLOBOCAN estimates, making it possible to adapt public health preventive and control plans to specific cancer problems within the diverse populations of India. The methodology should be further studied to assess its potential for implementation in other emerging economies without reliable cancer registration systems or civil registration systems."

⁽¹⁾ Dikshit R. et al. Cancer mortality in India: a nationally representative survey. *The Lancet*, Early Online Publication, 28 March 2012 doi:10.1016/S0140-6736(12)60358-4

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The International Agency for Research on Cancer (IARC) is part of the World Health Organization. Its mission is to coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and to develop scientific strategies for cancer control. The Agency is involved in both epidemiological and laboratory research and disseminates scientific information through publications, meetings, courses, and fellowships. If you wish your name to be removed from our press release e-mailing list, please write to com@iarc.fr.