

31 January 2018

\$46 billion in productivity lost to cancer in major emerging economies

Lyon, France, 31 January 2018 – A new study published today in the journal *Cancer Epidemiology*¹ evaluates for the first time the cost of productivity lost due to premature cancer deaths in several major emerging economies.

Led by the International Agency for Research on Cancer (IARC) in partnership with leading cancer research institutions in these countries, the study shows that the productivity loss in Brazil, the Russian Federation, India, China, and South Africa, collectively known as the BRICS countries, reached \$46.3 billion in 2012.

“Studying the economic impact of cancer in fast-developing economies highlights the urgency of tackling preventable cancers in these countries and the high cost of cancer not only in terms of lives but also in terms of its impact on the economy,” says the article’s lead author, Dr Alison Pearce.

The BRICS countries account for more than 40% of the world’s population, 25% of the global gross domestic product (GDP), and 42% of the world’s cancer deaths. Although they have diverse levels of wealth, and health indicators, the BRICS countries have all undergone particularly rapid demographic and economic growth. They are affected by infection-related cancers as well as cancers associated with changing lifestyles (changes in diet, lack of physical activity, obesity, reproductive patterns, etc.). Yet each of these countries has a distinct cancer profile, and therefore a tailored approach to national cancer control policy is required.

Economic impact of major cancers in BRICS countries

Across all the BRICS countries, liver cancer and lung cancer have the largest impact on total productivity lost.

The largest total productivity loss (\$28 billion) was in China, which is particularly affected by liver cancer. Infection with hepatitis B virus and dietary exposure to aflatoxins are major contributors to this productivity loss.

In the Russian Federation, the considerable contribution of liver cancer and head and neck cancers to premature cancer mortality overall was probably associated with high consumption of alcohol.

¹ Pearce A, Sharp L, Hanly P, Barchuk A, Bray F, de Camargo Cancela M, et al. (2018). Productivity losses due to premature mortality from cancer in Brazil, Russia, India, China, and South Africa (BRICS): a population-based comparison. *Cancer Epidemiol.* Published online 31 January 2018. <http://dx.doi.org/10.1016/j.canep.2017.12.013> PMID:29353153

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The impact of tobacco smoking on lung cancer mortality was also observed in South Africa and Brazil. Despite successful tobacco control policies, such as those implemented in Brazil, tobacco remains a significant risk factor in these countries and rising tobacco-related productivity losses are expected in the future. In India, the use of chewing tobacco was a leading cause of economic loss due to premature mortality from cancers of the lip and oral cavity.

Other lifestyle-related risk factors were also shown to have an effect on the cancer burden, such as rapidly increasing rates of obesity in Brazil.

“Policies to encourage lifestyle changes to reduce cancer risk in the BRICS countries could have major economic and ultimately societal impacts,” says Dr Isabelle Soerjomataram of the IARC Section of Cancer Surveillance. “Our study also shows the huge economic benefit of implementing efficient prevention strategies to reduce the large burden of cancers associated with infection, for example.”

The great potential in terms of economic benefit of introducing, or increasing coverage of, vaccination includes vaccines against hepatitis B virus, for the prevention of liver cancer, as well as against human papillomavirus (HPV), for the prevention of cervical cancer and potentially other anogenital and oropharyngeal cancers. Cervical cancer has a large economic impact among females in all BRICS countries (\$1.6 billion annually), particularly in South Africa. The evidence on the potential cost from delays in implementing immunization programmes, such as HPV vaccination, merits consideration in planning cancer control policy.

“The study demonstrates the economic importance of targeted primary prevention activities embedded in national cancer control policies. Focusing on tobacco control, vaccination programmes, and cancer screening, combined with access to adequate cancer treatment, would yield significant health and economic gains for the BRICS countries,” says IARC Director Dr Christopher Wild. “Investing in evidence-based preventive interventions as a part of national cancer control plans is not only cost-effective and life-saving but also a powerful lever for sustainable economic development.”

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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.