Cancer is costing BRICS economies billions each year

January 24 2018, by Alison Pearce

Credit: AI-generated image (disclaimer)

Premature – and potentially avoidable – death from cancer is costing tens of billions of dollars in lost productivity in a group of key developing economies.

Over two-thirds of the world's cancer deaths occur in economically

developing countries, but the societal costs of the disease have rarely been assessed in these settings.

In a paper published today in the *Journal of Cancer Epidemiology* we show that the total cost of lost productivity because of premature cancer mortality for Brazil, Russia, India, China and South Africa – known as BRICS – was USD$46.3 billion in 2012. (This was the most recent year for which cancer data was available for all these countries.)

The BRICS countries are a diverse group of nations but were originally grouped together because they were rising emerging economies. Currently the five countries combined comprise over 40% of the world's population and 25% of global gross domestic product.

South Africa has the highest cost per cancer death (USD$101,000) compared with the other BRICS countries. Its cost is five times that of India, which had the lowest cost per death. Given the size of China's population it has the largest overall loss (USD$28 billion).

Our research found that liver and lung cancers had the largest impact on total lost productivity across the BRICS countries due to their high incidence. In South Africa, there are high productivity losses per death due to a form of cancer – Kaposi sarcoma – that people with AIDS are particularly vulnerable to. This highlights the extent of the HIV/AIDS epidemic in Sub-Saharan Africa.

Tobacco and infection-related cancers (such as liver, cervical, stomach cancers and Kaposi sarcoma) were major contributors to productivity losses across all five countries. Many of these are amenable to prevention, early detection or treatment. But most developing countries don't have such programmes.

Our research underscores the fact that policies encouraging lifestyle

changes which reduce the risk of cancer could have positive effects on the BRICS countries' economies. Combining tobacco control, vaccination programmes and cancer screening with access to adequate treatment could yield significant gains for both public health as well as economic performance.

Calculating the cost

Beyond the public health impact, cancer also imposes economic costs on individuals and society. These costs include lost productivity caused by society losing the contribution of an individual to the economy because they died prematurely from cancer.

Valuing this lost production gives policy and decision makers an additional perspective when identifying priorities for cancer prevention and control. Locally tailored strategies could reduce the economic burden of cancer.

We used cancer statistics compiled by the World Health Organisation's International Agency for Research on Cancer to get the number of cancer deaths in 2012 for each country. We then estimated the number of additional years each person could have been productive (up until average retirement age), had they not died of cancer. Finally, we used national workforce data, such as the unemployment rate and average wages, to value the years of lost productivity.

The economic impact of cancer in countries can obviously differ for a range of reasons. These include variations in demography, exposure to cancer risk factors and economic environments. This means each country will have its own unique patterns of productivity loss.

In South Africa the five cancers resulting in the greatest productivity loss were lung cancer, cervical cancer, breast cancer, Kaposi sarcoma and

oesophageal cancer. Lung and cervical cancer had a particularly large economic impact.

In Brazil, lung cancer resulted in the greatest productivity losses. Rapidly growing rates of obesity in Brazil were also a contributory factor.

Both liver and head and neck cancers contributed to the high number of deaths in Russia. In India, lip and oral cancers dominated lost productivity. The lost productivity costs per leukaemia death were also relatively high. This could be because the advanced, multi-modality treatments required are not available or are difficult to access.

In China productivity lost due to cancer was USD$26 billion in 2012, more than all the other BRICS countries combined. Two-thirds of the costs were in urban areas (66%), considerably more than the proportion of people who reside in urban areas (52%).

Workforce and productivity are key resources in ensuring sustained economic growth, particularly in developing countries such as the five we studied. Understanding the local priorities for cancer prevention and control can play a big part in the economic health of these countries.

This article was originally published on The Conversation. Read the original article.

Provided by The Conversation