

The global disparity surrounding cancer treatment: How can the gap be closed?

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The world is witnessing an unprecedented and largely unperceived cost for inaction surrounding the treatment of cancer in developing countries. Once thought to be a problem exclusive to the developed world, cancer is now one of the leading causes of morbidity and mortality in low- and middle-income countries¹⁻⁵.

Cancer kills approximately 7.6 million people each year, two-thirds of whom are from low- and middle-income countries^{2,5}. In 1970, it was estimated that 15% of newly reported cancer cases were from developing countries compared with roughly 56% in 2008⁴. This growing trend is expected to continue with the developing world accounting for 70% of newly reported cancers by 2030³.

Blighted with poverty, low- and middle-income countries face a difficult task of managing the limited resources they possess in the fields of cancer prevention, screening, treatment, and palliative care¹. These countries have less than 5% of the resources required for adequate cancer control, but account for roughly 80% of the disability-adjusted life years lost worldwide to cancer^{1,6}. Compounding their financial burden is the grave reality that private and multilateral donors give little attention to expanding cancer prevention, diagnosis, and treatment in developing countries when compared with other diseases such as AIDS. As a result, cancer is remarkably absent from many key global health initiatives such as the Millennium Development Goals⁷.

In contrast, over the last three decades, wealthy nations have made significant gains in the fight against certain cancers. For example, the USA has seen both cancer incidence and mortality rates decline since peaking in the early 1990s as a result of increased awareness, prevention, screening, and new and more effective treatment options^{8,9}. Low cost and efficacious treatment strategies are now available for several malignancies including cervical, breast, and testicular cancer, and pediatric leukaemia. Unfortunately, they remain inaccessible to many individuals in developing countries.¹⁰

While the economic and social burdens of cancer continue to grow in developing countries, there are promising efforts underway in the fields of public policy, economics, medicine,

and scientific research. If implemented, these initiatives could have a positive impact on the treatment of cancer in developing countries.

Addressing inequities in the distribution of resources by creating a coordinated financing and procurement policy targeted at reducing prices while increasing access to life-saving interventions can alleviate the burden of cancer in developing countries¹⁰. Many cancers that pose the greatest burden in low- and middle-income countries can be treated with drugs of proven effectiveness that are off-patent and produced generically at a more affordable price. For example, in Malawi, Cameroon, and Ghana, the total cost of a generic first-line chemotherapy drug with a 50% cure rate for Burkitt's lymphoma is less than \$50 USD per patient¹¹.

Including cancer treatment in national health insurance programs is another alternative to help prevent further morbidity and mortality. In Mexico, the "Popular Health Insurance" program introduced in 2004 provides health insurance for low-income populations. Although the delivery of these cancer services remains suboptimal and financial sustainability is a challenge, approximately 37 million people are now enrolled in this program, which includes a range of cancer treatment entitlements¹².

Creating programs that effectively diagnose and treat cancer in rural areas of developing countries through task and infrastructure shifting measures is another approach gaining attention. Many resource-poor settings are now upgrading the role of the community health promoters, nurses, primary care physicians, clinics, and non-specialty hospitals to better manage cancer and other chronic diseases¹³.

International partnerships, such as the one between Partners In Health, Harvard Medical School, and the national ministries of health in Malawi, Rwanda, and Haiti also prove that gaining access to cancer treatment in resource-poor settings is feasible. In these environments, where no oncologists are available, care is provided by local physicians and nurse teams with support and training provided by Harvard-based facilities and Partners In Health. Within these institutions where cancer

treatment was once unavailable, patients are now provided with access to chemotherapy for various treatable malignancies including breast, cervical, and colorectal cancer, and Hodgkin's lymphoma¹⁰.

Collaboration between researchers in the developed and developing world is another avenue that can strengthen the research capacity of low-income countries while balancing global research agendas with local needs¹⁴. Currently, 95% of research is conducted in countries that account for less than 20% of the world population¹⁵. To address this disparity, barriers to cancer research have been identified, which include: inadequate training, a lack of advanced technologies, the high cost of diagnosis, and limited epidemiological statistics¹⁵.

Many cases of cancer in developing countries are treatable, yet the burden of cancer morbidity and mortality continues to grow. By targeting feasible approaches for cancer treatment and establishing clear and realistic future objectives, the international community can mount an effective and equitable response to the growing pandemic of cancer throughout the world.

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