

Oncology Practice in Low-resource Settings: Addressing Challenges and Opportunities

Ginderdoors Nys*

Department of Medical Oncology, University Hospital Brussels, Laarbeeklaan 101, Belgium

Introduction

Oncology practice in low-resource settings presents unique challenges that are shaped by economic, infrastructural, and societal factors. Despite the significant advances in cancer treatment globally, these regions often face limited access to care, inadequate healthcare infrastructure, and a shortage of trained professionals. However, innovative strategies and global partnerships are emerging to address these challenges, offering new opportunities for improving cancer care. This article explores the key challenges in oncology practice in low-resource settings and highlights potential solutions that can bridge the gap in cancer care. Cancer is a growing global health concern, with incidence rates rising in Low- and Middle-Income Countries (LMICs). These regions often struggle with inadequate healthcare systems, which are not fully equipped to handle the complexities of cancer care. In low-resource settings, the burden of cancer is compounded by a lack of infrastructure, limited access to essential medications, and a shortage of specialized healthcare professionals. These challenges necessitate innovative approaches and strategic partnerships to improve oncology practices and outcomes in these regions.

Description

One of the most significant challenges in low-resource settings is the limited availability of diagnostic and treatment facilities. Early detection of cancer is critical for effective treatment, yet in many low-income countries, access to diagnostic tools such as mammograms, CT scans, and biopsy services is limited. Consequently, many cancers are diagnosed at advanced stages, reducing the chances of successful treatment. Similarly, access to treatment options such as surgery, chemotherapy, and radiation therapy is often restricted. Facilities equipped to provide these services are usually concentrated in urban areas, leaving rural populations underserved. The scarcity of radiotherapy machines and essential cancer drugs further exacerbates the situation [1].

A severe shortage of trained oncologists, nurses, and other healthcare professionals is a common problem in low-resource settings. Many healthcare workers in these regions lack specialized training in oncology, which is crucial for effective cancer care. This shortage is often due to inadequate medical education systems, limited opportunities for professional development, and brain drain, where trained professionals migrate to higher-income countries for better opportunities. Cancer treatment is expensive, and the cost can be prohibitive for patients in low-resource settings. Many individuals in these

regions do not have health insurance, and out-of-pocket expenses for cancer treatment can be devastating. The high cost of medications, diagnostic tests, and treatment procedures, coupled with the indirect costs such as transportation and lost income, often lead to delayed or incomplete treatment [2].

Cultural beliefs and societal norms can also hinder effective cancer care in low-resource settings. In some communities, cancer is stigmatized, leading to delays in seeking medical help. Traditional medicine practices are often preferred over conventional treatments, and a lack of awareness about cancer symptoms and the importance of early detection further complicate the situation. Telemedicine and digital health technologies offer promising solutions for improving oncology care in low-resource settings. Telemedicine can help bridge the gap between patients in remote areas and specialized healthcare providers in urban centers or other countries. Through teleconsultations, patients can receive expert opinions on diagnosis and treatment plans without the need to travel long distances. Digital health tools, such as mobile applications and electronic medical records, can also enhance the management of cancer care. These technologies can improve patient monitoring, facilitate communication between healthcare providers, and ensure continuity of care, even in resource-constrained environments [3].

Improving healthcare infrastructure is essential for enhancing oncology practice in low-resource settings. This includes increasing the number of diagnostic and treatment facilities, particularly in rural areas. Governments and international organizations can collaborate to fund the construction of cancer centers and the procurement of essential equipment such as radiotherapy machines. In addition, partnerships with pharmaceutical companies can help ensure a steady supply of affordable cancer medications. Public-private partnerships can also play a crucial role in improving infrastructure and making cancer care more accessible to underserved populations. Investing in the training and education of healthcare professionals is crucial for improving cancer care in low-resource settings. Capacity-building programs can provide healthcare workers with the necessary skills and knowledge to diagnose and treat cancer effectively. These programs can be delivered through online courses, in-person workshops, and international exchanges, where healthcare professionals from low-resource settings can gain experience in high-resource environments [4,5].

Oncology practice in low-resource settings faces significant challenges, including limited access to diagnostic and treatment facilities, a shortage of trained healthcare professionals, financial constraints, and cultural barriers. However, these challenges also present opportunities for innovation and collaboration. By leveraging telemedicine, strengthening healthcare infrastructure, investing in capacity building, and implementing national cancer control programs, it is possible to improve cancer care in low-resource settings. The global health community, governments, and private sector partners must work together to address these challenges and ensure that all individuals, regardless of where they live, have access to quality cancer care. Through concerted efforts, we can make significant strides in reducing the global burden of cancer and improving outcomes for patients in low-resource settings.

Conclusion

Furthermore, training community health workers and primary care

*Address for Correspondence: Ginderdoors Nys, Department of Medical Oncology, University Hospital Brussels, Laarbeeklaan 101, Belgium, E-mail: ginderdoorsnys@gmail.com

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providers in cancer prevention and early detection can help reduce the burden on specialized cancer centers. Empowering local healthcare providers to manage cancer cases can lead to earlier diagnoses and better patient outcomes. National Cancer Control Programs (NCCPs) are essential for a coordinated approach to cancer care in low-resource settings. These programs can provide a framework for cancer prevention, early detection, treatment, and palliative care. NCCPs should be tailored to the specific needs of the population and should include strategies for raising awareness about cancer, promoting healthy lifestyles, and improving access to care. Governments can work with international organizations such as the World Health Organization (WHO) to develop and implement effective NCCPs. These programs should also include measures to reduce the financial burden of cancer treatment, such as subsidizing the cost of medications and providing social support for patients and their families.

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Conflict of Interest

No potential conflict of interest was reported by the authors.

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