

Expanding global access to radiotherapy: the IAEA perspective

2015 is a momentous year for global health and a time of immense opportunity. World leaders will meet at the UN Headquarters in New York (NY, USA) during the UN Sustainable Development Summit (Sept 25–27) to adopt a new set of universal and transformative Sustainable Development Goals (SDGs). For the first time, a target calling for a reduction by a third in premature mortality from non-communicable diseases—including cancer—by 2030 will be included.

So far, global efforts to address the growing demands for comprehensive cancer control in low-income and middle-income countries have been insufficient, and cancer has become a leading cause of premature death worldwide.¹

Radiotherapy plays an indispensable part in the management of cancer. It not only generates substantial benefits for patients in terms of survival and improved quality of life, but also is of immense palliative value, reducing pain and suffering, particularly in settings with limited access to appropriate pain medication.

The Lancet Oncology Commission² presents robust and compelling evidence of the notable health gains associated with the clinical applications of radiotherapy, and also quantifies for the first time the noteworthy economic benefits of increased investment in radiotherapy. It also substantiates the experience of the International Atomic Energy Agency (IAEA) that radiotherapy is affordable, feasible, and can be safely and consistently deployed in low-income and middle-income countries.

The economic models proposed by the authors quantify the gradual yet substantial investments needed to ensure greater equity in the global access to this essential health technology. Although their analysis was based on several assumptions and approximations with inherent limitations, the authors provide a general assessment of the economic effects of the cancer epidemic and the level of investment needed to close the gap and align resources with the actual burden of cancer, enabling estimation of the level of research, innovation, and global commitment required to achieve the maximum public health impact in cancer management.

As the authors of the Commission recognise, the IAEA has more than 30 years' experience of supporting countries in setting up and upgrading radiation medicine infrastructure and training the necessary professionals for

the effective diagnosis and radiotherapeutic treatment of cancer. As an organisation that has been actively working to strengthen radiotherapy capacity worldwide, the financial investment made by the IAEA in the past decades has been substantial.³ Additionally, the IAEA ensures that the delivery of teletherapy, brachytherapy, quality-assurance, and dosimetry equipment is supported by appropriately trained professionals and service maintenance contracts.⁴ This approach contributes to the safe and effective use of equipment and to its sustainability.⁵

Through its various programmes, such as the Technical Cooperation programmes, the Human Health programme and, more recently, the Programme of Action for Cancer Therapy, which was established in 2005, the IAEA is committed to continuing to capitalise on previous experience and introduce, expand, and improve radiotherapy services, working with partners such as WHO to improve cancer treatment, care, and control through collective action in low-income and middle-income countries. The need is large: 36 low-income countries still do not have any radiotherapy capacity.^{1,6} Thus, installation and operation of radiotherapy centres around the world has to be approached on a country-by-country basis, assessing needs and providing solutions to the individual country's particular situation.^{7,8}

As noted in the Commission, other major factors, such as political commitment, public awareness, education about the benefits of radiotherapy, reduction of stigma associated with cancer and radiotherapy, transportation options for patients, and affordability need to also be adequately addressed to ensure accessibility to radiotherapy services. The Commission's findings provide an important contribution to catalyse global discussion on how to overcome these challenges. The IAEA is committed to expand and fast-track its active dialogue with policy makers, international stakeholders, and the private sector to promote the introduction and expansion of suitable, effective, and high-quality radiotherapy technology solutions worldwide.

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For more on Sustainable Development Goals see <https://sustainabledevelopment.un.org>

We have no competing interests.

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