



Overview

Global Access to Radiotherapy in Low- and Middle-income Countries



M. Abdel-Wahab, E. Fidarova, A. Polo

Division of Human Health, Department of Nuclear Sciences and Applications, International Atomic Energy Agency, Vienna, Austria

Received 2 December 2016; received in revised form 12 December 2016; accepted 12 December 2016

Abstract

Over the last 60 years, the International Atomic Energy Agency (IAEA) has been working to introduce, expand and improve radiotherapy services, working with partners such as the World Health Organization (WHO) to improve cancer diagnosis, treatment, care and control through collective action in low- and middle-income countries (LMICs). The Lancet Oncology Commission on radiotherapy published a report that defined five calls for action to expand global access to radiotherapy, drawing on the previous work of the Global Taskforce on Radiotherapy for Cancer Control. The IAEA supports LMICs in the development of the required national infrastructure and regulatory authority for radiation and nuclear safety and in the training of human resources necessary for the provision of high-quality effective and safe radiation medicine services for the diagnosis, treatment and palliative care of cancer patients, helping in this way to address the different priorities outlined in the Lancet Commission report.

© 2016 Published by Elsevier Ltd on behalf of The Royal College of Radiologists.

Key words: Access; cancer; financing; human resources; IAEA; LMIC; national cancer control plans; radiotherapy; universal health coverage

Statement of Search Strategies Used and Sources of Information

The primary goal of this report was to present activities and strategies used by the International Atomic Energy Agency (IAEA) to address the different ‘calls for action’ contained in the report of the Global Task Force for Radiotherapy in Cancer Control.

The papers were selected and reviewed by the authors. The literature search was carried out using the PubMed database. Medical subject headings included ‘radiotherapy’, ‘global’, and ‘access’ and ‘IAEA’. This search was complemented by searches of reference lists of articles found in personal files or cited in papers and reviews. The last search was carried out in November 2016.

Author for correspondence: M. Abdel-Wahab, Division of Human Health, Department of Nuclear Sciences and Applications, International Atomic Energy Agency (IAEA), P.O. Box 100, 1400 Vienna, Austria.

E-mail address: M.Abdel-Wahab@iaea.org (M. Abdel-Wahab).

<http://dx.doi.org/10.1016/j.clon.2016.12.004>

0936-6555/© 2016 Published by Elsevier Ltd on behalf of The Royal College of Radiologists.

Introduction

The Lancet Oncology Commission on radiotherapy published the results of work of the Global Taskforce on Radiotherapy for Cancer Control [1]. This included a detailed analysis on worldwide coverage of radiotherapy services and projections of costs for scaling up radiotherapy in countries with various income levels. It showed that with potential health and economic benefits there was a strong case for investment in the expansion of global access to radiotherapy [1]. The release of the report was well timed, as it occurred the same year that sustainable development goals were adopted.

According to the World Bank, there are 139 low- and middle-income countries (LMICs) in 2016. The low-income countries (L-IC) group consists of 31 countries, from which only nine (29%) have operating radiotherapy services. The lower middle-income countries (LM-IC) group has 52 countries, from which 34 (65%) have radiotherapy services. In the upper middle-income countries (UM-IC) group, 43 of the 56 countries (76%) have radiotherapy services.

These numbers reflect the inequitable delivery of cancer care, leading indefectibly to differences in health outcomes

among populations [2]. Over the last 60 years, the International Atomic Energy Agency (IAEA) has been working to introduce, expand and improve radiotherapy services, working with partners such as the World Health Organization (WHO) to improve cancer diagnosis, treatment, care and control through collective action in LMICs [3–6]. The IAEA is the main agency within the United Nations system responsible for radiation medicine applied research, guidance on radiation medicine strategies, setting radiation-related norms and standards, and providing technical expertise to the IAEA member states with respect to radiation medicine.

The IAEA, through its technical cooperation and human health programmes supports LMICs in the development of the required national infrastructure and regulatory authority for radiation and nuclear safety and in the training of human resources necessary for the provision of high-quality effective and safe radiation medicine services for diagnosis, treatment and palliative care of cancer patients [3,5,7–11]. Since 1983 the IAEA has contributed a budget of nearly €300 million for radiotherapy and cancer projects worldwide. In the year 2016 there are more than 150 ongoing national and regional projects in radiation oncology and cancer with a total budget of more than €10.5 million.

However, it is evident that multi-stakeholder strategies are needed in order to bridge the existing gap for required investments, which depending on the economic model used is estimated to be between \$96.8 and \$184.0 billion [1].

A possible way forward for the global community to work together is through global projects in radiotherapy with commitment of governments and engagement of multiple capable partners. Here we discuss how the mechanisms, resources and experience of the IAEA can contribute to addressing calls for action announced by the GTFRC in 2015 through the planning and implementation of global projects in radiotherapy.

Action 1: Population-based Cancer Control Plans

The GTFRC recommends the inclusion of radiotherapy into population-based cancer plans, with a target of 80% of the countries having cancer plans including radiotherapy by 2020 [1]. Acknowledging the growing cancer burden, the complex nature of the disease, existing disparities and significant associated costs, the WHO has promoted the establishment of national cancer control programmes (NCCPs) for more than 20 years [12,13]. According to the WHO definition, a NCCP is ‘a public health programme designed to reduce the number of cancer cases and deaths and improve quality of life of cancer patients, through the systematic and equitable implementation of evidence-based strategies for prevention, early detection, diagnosis, treatment, and palliation, making the best use of available resources’ [13]. On 25 September 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development at the United Nations Sustainable

Development Summit with the set of 17 sustainable development goals with 169 targets. One of them aims at reducing by one third premature mortality from non-communicable diseases, including cancer. The high level of political commitment to control cancer globally brings new opportunities to improve global access to radiotherapy, an essential part of cancer management. There are attempts to draw parallels with achieved successes in HIV/AIDS control and learn from that experience. Joining efforts worldwide it was possible to increase access to antiviral therapy in LMICs 10-fold over just 5 years, between 2003 and 2008. Contrary to what was initially considered by many organisations as an unattainable goal, improved access to therapy led to a dramatic decline in HIV-related mortality [14].

Sustainable radiotherapy services are possible when healthcare systems are capable of supporting all necessary elements of cancer control. Therefore, it is essential that radiotherapy be considered as an integral part of comprehensive cancer control. The Programme of Action for Cancer Therapy (PACT) of the IAEA advocates for the importance of the sustainable integration of radiation medicine in comprehensive national cancer control strategies within a broader framework of strengthening national cancer control capacities in LMICs [15]. In 2009, the WHO and the IAEA established the WHO-IAEA Joint Programme on Cancer Control to coordinate activities and resources supporting the development and implementation of sustainable and comprehensive cancer control programmes, particularly in LMIC. Assessment of national cancer control capacity and drafting a NCCP is a complex process and LMICs often require expert support to establish, prioritise and advance cancer control activities. The IAEA in collaboration with the WHO and the International Agency for Research on Cancer (IARC) has developed a comprehensive assessment tool implemented through ‘integrated missions of PACT’ (imPACT missions). Detailed information about the organisation, methodology and relevance of the missions to the recipient countries is available in a number of recent publications [16,17]. For radiotherapy specifically, existing capacity is assessed considering equipment, human resources (including education and training), consumable materials and procedures. Additionally, relevant safety, regulatory and quality assurance requirements are taken into account.

Establishing and/or expansion of national radiotherapy services require appropriate planning, including clear financing strategies, to ensure quality and sustainability. The national radiotherapy plan should be integrated into the NCCP and has to have clear implementation and monitoring mechanisms in place [18]. Analysis of imPACT reports in the IAEA Technical Cooperation Europe region during the period between 2005 and 2013 showed that none of seven recipient countries had a national radiotherapy plan (R. Camacho, unpublished data) at the time of assessment. Countries are encouraged to use analysis, conclusions and recommendations of the imPACT mission final report as a source of data for planning national radiotherapy services.

Download English Version:

<https://daneshyari.com/en/article/5698190>

Download Persian Version:

<https://daneshyari.com/article/5698190>

[Daneshyari.com](https://daneshyari.com)