Access to Cancer Treatment: An Overview

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Massoud Samiei
Consultant, IAEA/PACT Programme Office
Global Inequality

- With over 7 million new cases of cancer, Developing Countries (DCs) have more than 55% of the world’s cancer patients
- Less than 30% have access to any treatment services,
- Only 5% of global resources for cancer are spent in DCs
- Medicine, technology, skills and experience exist to treat and cure cancer, but there are enormous limitations on both quantity and quality of cancer care in DCs
- DCs are faced with a difficult choice of where to allocate the scarce financial resources along the continuum of cancer control
- Inequalities in accessing cancer treatment, with particular focus on radiotherapy, are presented here
Current Status of Cancer Treatment

- Significant overall lack of capacity for cancer prevention, early detection, **treatment**, and palliative care
- Huge shortage of **cancer professionals** in all DCs
- **Africa:** Available radiotherapy only 20% of the need
- **Asia & Pacific:** about 30% (including India and China)
- **Latin America and Eastern Europe:** 35-50% of needs
- Access to **cancer drugs** is another issue including costs
- Palliative care is frequently not addressed
- Gross under-utilization of **opioids** in DCs
- The role of **social, economic and political factors** is not always known, but it’s an issue deserving more study
Treatment is not Accessible

- Radiotherapy is a cost-effective treatment and is less expensive than both surgery and chemotherapy
- 85% of the world’s population lives in DCs
- They have less than 35% of the world’s radiotherapy facilities (around 4500 units)
- DCs need some 9600 megavoltage machines
- A shortage of over 5000 units
- The needs for radiotherapy in DCs are higher than high income countries because of advanced stage cancers, leaving palliative radiotherapy (or use of opioids) as one of the only options for treatment
Geographical Distribution

No RT Services:
Afghanistan, Turkmenistan, Laos, Mali, Niger, Benin, Gabon, Congo, DR of Congo, Central African Rep., Somalia, Eritrea, Mozambique, Mauritania, Chad, Sierra Leone, Liberia, Haiti ...
Examples of Access

- **Uganda**: one radiotherapy unit available in Kampala to treat the country’s 27,100 yearly cancer cases.
- About a 1000 of these patients are treated, i.e., **5% coverage and leaving 95% without any opportunity**.
- Uganda needs over 20 operational radiotherapy units.

- Only **Egypt** and **Morocco** with over 80% coverage of cancer patients needing radiotherapy, and **South Africa** and **Libya** with nearly 100% coverage have theoretically an acceptable situation ....

- How many patients can actually have equitable and affordable access to these services remains open ...
Examples of Access

- **Brazil**: 250 radiotherapy units treating about 650 patients per machine.
- 86,000 patients, or over 25% of all cancer patients, have no access to treatment because over half of all radiotherapy units are located in southern region.
- **Zambia**: established its only cancer centre in 2006 in Lusaka with IAEA support.
- Located over 1000 kilometres from population concentrations near Zambia’s borders, it is much harder for many patients to seek treatment due to travel costs.
- **Access** and not only availability is a vital determinant for equality.
Challenges in Providing Radiotherapy

1. Procurement of RT Equipment
   - Complexity and price of new cobalt units is increasing
   - **Cobalt** units have become more complicated
   - The price of replacing sources is increasing
   - Logistical/security problems with source transportation
   - **Linac** units often unaffordable and less appropriate for DCs
   - Debates on technology (**Linac vs. Co-60**)  

2. Human Resources
   - **Qualified staff** and radiotherapy experience
   - Training opportunities (centres of competence and learning)
   - Training for new equipment / no continuous training / brain drain
Challenges in Providing Radiotherapy

3. Limitations in delivery, operation & maintenance

- Challenging working **conditions** (climate, power and water supply etc)
- Limited **warranty & after-sale service**
- Manufacturers’ local/regional representatives
- Lack of trained **maintenance** engineers for radiotherapy
- Optimum and efficient use of radiotherapy equipment

4. Policy and infrastructure

- Minimum **safety standards**
- Inadequate **basic infrastructure** (transportation, water, electricity, etc)
- Costs of same equipment in developing countries often higher
- Slow bureaucratic procedures
- Equipment is procured without servicing & maintenance contracts
- Incomplete systems & interfacing issues due to isolated planning (radiotherapy planning not integrated in national cancer plans)
Treatment is not Affordable

- **Ethiopia**: State-provided health insurance, but for cancer, it covers 25% of fees spent in public hospitals for diagnostic, surgery and radiotherapy, and pays no chemotherapy or palliative care costs.
- **Indonesia**: Only low-income people receive treatment funded by public health insurance; the “middle-class” cannot afford private hospitals.
- **Moldova**: Compulsory health insurance where the state covers 55% of costs, leaving the patient to pay the remaining balance.
- **USA**: 20 percent of people with health insurance can't afford the cancer therapy they need; another 20% without health insurance.
- Most patients cannot pay for treatment unless governments provide the services at no cost or health insurance pays.
The Good News

• Providing **equitable and affordable access to cancer care** for all who need it, and making the **essential medicine, technologies and specialists available**, is an increasingly high priority for governments in DCs.

• **This is also a priority beyond WHO for many UN agencies and active international organisations such as the IAEA, IARC, UICC and INCTR.**

• **New emphasis following the comprehensive resolution approved by all UN Member States in September 2011 on the prevention and control of non-communicable diseases (NCDs**).
IAEA´s Role and PACT

- Increased demand for IAEA assistance to expand radiotherapy in DCs
- Resources available to the IAEA are inadequate to address the issue
- Existing radiotherapy infrastructure in these countries is the best available launching platform to extend the IAEA’s assistance by encouraging investments in other cancer components within an NCCP
- Recognizing that strategic planning and capacity building for improved cancer care cannot occur without collaboration with other international key players, the IAEA launched the Programme of Action for Cancer Therapy (PACT) in 2004
- PACT is the IAEA’s umbrella programme for combating cancer and builds upon IAEA’s extensive experience in radiation medicine
- PACT works closely with national cancer institutes, WHO, IARC, UICC, INCTR, ACS, the private sector and other key players
What PACT has Done?

1. Forged over 25 partnerships with global players including a Joint Programme on Cancer Control with the WHO
2. Conducted 41 imPACT reviews (cancer needs assessments)
3. Increased cancer awareness at policy-level in DCs and encouraged comprehensive and long-term planning for RT
4. Launched a Virtual University for Cancer Control network in Africa (VUCCnet)
5. Established an Advisory Group for increasing access to affordable radiotherapy technology in DCs (AGaRT)
6. Mobilized over $30 million mainly at country level to support cancer control and care projects and the fight against cancer
7. Established 8 PACT Model Demonstration Sites (PMDS) to promote cancer control planning and integration of radiotherapy
National cancer centre operational through IAEA support. A comprehensive national cancer plan (2008-2017) endorsed by the Government is under implementation. The Government of Spain is funding the project “Strengthening of cervical and breast cancer diagnosis and treatment at the Hospital Bertha Calderon” (US $315,000)
Mother Theresa hospital received extensive IAEA support to establish RT services. The project “New Model for Breast Cancer Awareness and Early Detection” (US $100,000) funded by OPEC Fund for International Development is being implemented. As part of the project, a national public awareness campaign was conducted in October 2011 and 15 Albanian breast cancer professionals were trained in Italy.
Ocean Road Cancer Institute established with IAEA support. Treatment services improved. Around 40 health professionals in Tanzania received training in various areas of cancer control through the sponsorship of PACT.
Mongolia’s National Cancer Centre, established with IAEA support, utilised funding provided by the United Nations Women’s Guild, constructed a playground for children with cancer on their premises, providing the young cancer patients with an escape from hospital life. An NCCP is operational.
Vietnam has expanded its cancer care services extensively with IAEA and WHO support. OPEC Fund for International Development is funding a project on breast and cervical cancer screening and public awareness activities in Vietnam (US $450,000). Implementation started in 2012.
Sri Lanka has a National Cancer Control Plan (2010–2015) addressing improvements in all services. The existing radiotherapy hospitals have also been strengthened to expand capacity and coverage.
Ghana’s 1st cancer hospital established in 97 with IAEA support. Joint efforts of IAEA and Ghana have resulted in $14 million long term low interest loans for Ghana from OPEC Fund for International Development and the Arab Bank for Economic Development in Africa. This is helping Ghana to expand its cancer infrastructure and capacity in 3 regions of the country.
PACT has sponsored training for more than 250 professionals from over 50 DCs. Through this training support, these countries have had an opportunity to expand their cancer workforce, leading to improvements in overall quality of cancer control services.
Conclusions

• Significant lack of equitable, accessible and affordable cancer treatment
• The examples shared here demonstrate that it is possible to address this issue and create equal opportunities for DCs through joint work and partnerships
• There is a lot that the international community can do by supporting global partnerships and joint programmes among the various active key players such as the IAEA, UICC, IARC, INCTR, many others active in DCs
• The encouraging news is the high level resolution adopted in September 2011 by the UN General Assembly on NCDs following the leadership and efforts of WHO supported by other UN agencies and a significant number of NGOs
• The implementation of this resolution will open the way for the donor community to look at successful programmes and interventions that can offer suitable and sustainable solutions for developing countries.
• In this context, cancer treatment services should be planned at the national level as an integrated component of an NCCP including resources & workforce requirements as part of the targets defined to implement the resolution.