



RT Essential Standards in Cancer Plans Training & Technical Support

Key Component:	Training & Technical Support
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The ESSENTIALS: <i>Quality indicators, not the minimum requirements but the ideal scenario for quality access</i>	The importance of education, training and technical support as fundamental aspects of radiation therapy within a national cancer plan needs to be clearly articulated at the outset. Education and Training: 1. An acknowledgement that radiation oncology professionals require specific professional knowledge and skills to provide citizens with highest quality care needs to be given by governments of all nations. 2. Use and adherence to the international curricula of the International Atomic Energy Agency (IAEA) for radiation/clinical oncologists, radiation therapists, physicists, engineers, quality managers and nurses is the recommended quality standard in education for entry to the respective professions. Governments have overall responsibility for the implementation of these curricula at national level and establishing their quality indices. 3. Governments need to support the university sector to educate the radiation therapy workforce.

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	4. Governments have overall responsibility to set up accreditation and monitoring bodies whose remit is to ensure that the programmes delivering these curricula meet quality standards. 5. Radiation Therapist entry to practice education in particular is highly heterogeneous globally. For quality in patient care and safe and accurate treatment delivery, educational programmes for radiation therapists need radiation therapy-specific education. A majority programme with diagnostic imaging is inappropriate. 6. Continuous Professional Development (CPD), Continuous Medical Education (CME) is a requirement for those continuing to work in each profession. There are various systems for monitoring such education globally and these standards should be set nationally by the accreditation body. 7. Development of quality and safety cultures within radiation oncology practice is paramount. This includes, but is not limited to, radiation protection, management of radioactive materials for brachytherapy, incident and near miss reporting using internationally recognised databases such as SAFRON (IAEA) and ROSEIS (ESTRO), peer review (e.g. of delineations) and clinical audit. Research: 1. Research, including clinical trials, must be conducted within radiation oncology globally in all contexts. To continuously improve patient care and future-proof practice, research is a necessity. Education in research skills is mandated in the IAEA curricula. Technical Support and Training: 1. Correct reporting of functional equipment within countries is required. Counting of non-functional equipment in national reports must cease. 2. Governments must commit to realistic financial planning for service contracts and replacement components when tendering for new equipment. This must be seen as an integral component of equipment purchase. 3. Those charged with writing tender documents must be supported in understanding operational costs and such costs must be reflected in equipment tenders. 4. Local first line support for equipment maintenance and response to breakdowns is necessary. This entails partnering
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	with local bioengineers, who will require training. 5. Wider regional or national expert support is necessary, creating 'hubs' where support can be dispatched regionally or nationally. 6. Software support may be delivered online but only in contexts where the infrastructure permits. Power failures are common in many regions. 7. Virtual/augmented reality online support can be considered only in specific circumstances (e.g. where travel to a specific region is not permitted for safety reasons).
Checklist:	☐ Recognition by governments that specific education of radiation oncology professionals is their responsibility ☐ Acknowledgement by governments that accreditation and quality indices of educational programmes is their responsibility ☐ Implementation of recognised international curricula for radiation oncology professionals (IAEA curricula) ☐ CPD and CME opportunities for radiation oncology professionals ☐ Establish a framework for quality assurance and quality improvement for CPD and CME as this is important to provide continuous information on the progress towards the educational goals, as well as describe the current state of a lifelong learning program. ☐ Development of safety and quality cultures in radiation oncology departments globally ☐ Development of research-led practice culture in radiation oncology departments, whatever their context ☐ Improved understanding at government level of the true operational costs of radiation oncology, beyond equipment purchase ☐ Consider existing aid for training and funding (e.g. fellowships in RT specific domains promoted by IAEA and research grants).

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	☐ Establishment of first line technical support by partnering with local bioengineers ☐ Development of service 'hubs' nationally or regionally to provide technical support in a time efficient manner ☐ Consideration of online support in contexts where infrastructure permits
Implementation: <i>Financing to execute, distribute, implement and measure</i>	1. Governments must acknowledge that implementing quality radiation therapy in their country requires significant financial commitment, not solely for equipment purchase and maintenance, but for education of radiation oncology professionals. 2. Educational institutions need to be directed by government to adhere to international best practice curricula, such as those of the IAEA in their national educational programmes. There needs to be adequate resourcing of universities for specifically radiation therapy education. 3. Governments must appoint an oversight/regulatory body to ensure that the competencies of these curricula are met (<u>competencies</u> must be audited, not number of hours of teaching or credits). This will ensure radiation therapy-specific education is taught in programmes and that graduates can deliver quality and safe radiation therapy. 4. Equipment tenders should not be accepted by vendors without evidence of realistic operational financial planning for service contracts and replacement parts. 5. All stakeholders must work together to develop local first line and national/regional hub support. This will require financial contributions from the government and stakeholder input from radiation oncology/clinical engineering professionals as well as industry. 6. The funding of research posts in the radiation therapy professions is essential to provide leadership, capacity and future-proof national practice.