

The RCT Evidence Criteria – Radiotherapy Physics

These standards have been developed to support the route to equivalence. They reflect the standards that have been applied throughout the life of register and have been derived from competencies contained within approved training route criterion. The RCT Management Panel are able to quality assure technologists via this route and determine the depth and breadth of their knowledge and skills. Only when successfully evidencing these standards through a portfolio can the RCT Management Panel be satisfied that Technologists are able to carry out their role safely and effectively.

A. Safe Working Practice

1. Provide evidence that you are competent with a range of generic skills including mandatory training e.g. infection control and basic life support.
2. Demonstrates an understanding and application of health and safety and risk management in all aspects of the Clinical Technologists role.
3. Demonstrates an understanding of, and works within, all relevant legislation to their role including departmental local rules.
4. Perform health and safety risk assessments (including radiation risk assessments for ionising radiation) in accordance with standard operating procedures.
5. Demonstrates an understanding of radiation incident reporting.
6. Demonstrates effective communication skills and team working.
7. Demonstrates a professional approach to all aspects of the Clinical Technologists role.
8. Observes and assists in a range of procedures within the Radiation Physics discipline e.g. Preparation of immobilisation devices, treatment planning and machine dosimetry. Adhering to standards of professional practice throughout.
9. Demonstrates an understanding of the statutory, regulatory provisions and guidance relating to working with radiation in the contexts of patients, staff and treatment machines.
10. Assists in giving instructions to patients and colleagues regarding radiation hazards, doses and restrictions.
11. Demonstrates reflective practice as part of the learning process.

B. Equipment Management

1. Assists in the procurement of equipment, accessories or consumables.
2. Demonstrates the use of an equipment inventory system.
3. Performs cleaning/decontamination of equipment.
4. Performs routine equipment quality control checks and review and interpret results.
5. Performs a range of fault finding and first line user maintenance.
6. Demonstrates knowledge of radioactive source use, management, transport and disposal.
7. Demonstrates an understanding of quality management systems.

C. Radiation Transport and Dosimetry

1. Performs source checks and complete all relevant paper work prior to transport as appropriate.
2. Perform 'leak' tests, review results and take appropriate action.
3. Perform contamination checks and maintain appropriate records.

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D. Radiotherapy Physics

1. Dose planning, virtual simulation and image guidance.
 - I. Produce a range of radiotherapy dose treatment plans using image data, defined treatment parameters, dose calculations and simulation processed to assist in the safest and most effective treatment being delivered to the patient, following local treatment site specific protocols.
 - II. Demonstrate an understanding of image guidance to check and modify treatment plans following local protocols.
2. Mould room
 - I. Make safe and appropriate immobilisation devices for patients, considering the individual needs of each patient, in accordance with local protocols.
 - II. Manufacture appropriate beam modification devices.
 - III. Provide appropriate explanations about procedures being performed to patients using appropriate strategies to overcome difficulties in communication which may exist.
3. Brachytherapy
 - I. Participate in the preparation and delivery of brachytherapy treatment procedures.
 - II. Assist clinicians in operating theatres with the handling and assembly of brachytherapy applicators, using sterile techniques in line with local protocols.

E. Quality Control of Radiotherapy

1. Performs routine quality control on orthovoltage and megavoltage equipment, including dosimetry measurements.
2. Demonstrates an understanding of the frequencies of quality control and the regulator and advisory framework around which QC schedules are designed.
3. Performs quality control on other radiotherapy equipment e.g. HDR brachytherapy, CT and conventional simulators.
4. Assist with treatment planning systems.

F. Good Scientific Practice

1. Adhere to relevant standards of professional practice as defined in Good Scientific Practice. Demonstrate that you have read, understood and comply with this document in all aspects of work.

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