



# Guidance on the management and governance of additional radiotherapy capacity

## Executive summary

Institute of Physics and Engineering in Medicine  
Society and College of Radiographers  
The Royal College of Radiologists

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The Royal College of Radiologists (RCR) published a document for *Guidance on the Development and Management of Devolved Radiotherapy Services* in 2004. Since then a number of such units have been established, using a number of different service models. This document summarises the practical issues to be considered in developing a new radiotherapy service and describes the service models that have been developed. It should support and inform those with responsibility for commissioning and providing additional radiotherapy capacity.

## **Establishing the case for increased radiotherapy capacity**

The case to improve patient access to radiotherapy in the UK has been made in previous reports. Service providers and their clinical teams must engage actively with commissioners to agree financial support for additional radiotherapy capacity. A new radiotherapy service must be integrated into the existing network of cancer services and advanced workforce planning is needed to secure adequate radiotherapy staffing.

## **Developing additional radiotherapy capacity: project management**

Detailed planning is required to assess local patient needs for radiotherapy. A multidisciplinary project management team, with a radiotherapy lead, should agree the scope of the local service, and the resources needed to provide a clinically safe and effective service for patients.

## **Expansion of radiotherapy services**

Options for providing additional capacity include setting up devolved radiotherapy departments with links to a cancer centre hub. Convenient patient access to the new service is an important consideration. A new unit should have a minimum of two linear accelerators and the building plan should consider the possible future need for additional accelerators.

## **Management and clinical governance**

The new radiotherapy service must have clear professional leadership, comprehensive IR(ME)R documentation, a quality management system and a system for radiotherapy error reporting.

A prospective audit of the service with independent dosimetry checks of radiotherapy equipment should be undertaken. There is a need for audit and analysis of radiotherapy errors and near misses, particularly in the early stages of the new service. Systems should be in place to ensure rapid access to effective medical physics expert and clinical advice.

## **Information technology (IT)**

IT is an integral component of the radiotherapy service and IT professionals should work with the service design team at an early stage. Process mapping of the radiotherapy patient pathway ensures that IT staff will have a good understanding of the needs of the radiotherapy service. The use of an electronic patient record facilitates communication between the professionals involved in patient care.

## **Radiotherapy planning and delivery**

A clear process for radiotherapy planning and treatment must be established for all patients. Additional equipment will be needed for treatment planning; for example, CT simulation and a treatment planning system. The need for access to imaging such as MR and PET scanning should be considered.

All linear accelerators in the new service must be capable of both intensity-modulated radiotherapy (IMRT) and image-guided radiotherapy (IGRT). Appropriate verification systems should be in use such as *in vivo* dosimetry. There should be a plan for subsequent equipment replacement to minimise disruption of the clinical service.

## **Relationship with 'host' acute hospital services**

A new radiotherapy service will need to establish a number of key relationships and services with the host hospital service on which it is based: basic infrastructure support and diagnostic, pathology and pharmacy services. Additional diagnostic radiology capacity may be needed and access to resuscitation facilities with appropriate equipment and competent personnel should be available.

## **Professional staffing**

The appropriate size and skill mix of the required radiotherapy workforce must be designed and agreed with input from the radiotherapy manager, the lead medical physicist and the clinical director. This will be based on guidance from the Society and College of Radiographers, the Institute of Physics and Engineering in Medicine and The Royal College of Radiologists.

Additional education and training should be offered to enhance workforce flexibility, with flexibility in working hours to provide continuity of the patient service.

## **Clinical pathways and management**

There is a risk that there will be a fragmentation of patient care if this takes place at multiple sites with multiple clinical services. An overall plan should be in place for the clinical management of the patient within a clinical care pathway.

The clinical oncologist authorising radiotherapy is responsible for ensuring that appropriate clinical review is in place, that there is competent clinical support for the anticipated toxicity of radiotherapy, and that facilities are in place to escalate the level of medical care needed. Decision-making on the patient case mix treated should focus on the level of support and care that patients need. Clear clinical protocols should be agreed for each category of patient being treated.

Patients should be able to get access to the range of support and rehabilitation services and care needed during and after treatment.

## **Operational issues**

A new radiotherapy service will need to show a good level of performance for patient throughput and also the delivery of a high standard of complex radiotherapy techniques.

Detailed plans for equipment quality assurance and servicing should be in place to minimise equipment downtime.

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