

MAHCP Career Profile

Radiation Therapist

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The aim of radiation therapy is to deliver a precise dose of radiation to a defined area of the body. Radiation therapists locate tumors and surrounding sensitive structures; plan and deliver radiation treatments; assure the quality of equipment and provide ongoing clinical assessment, education and support of the patient.

This high-tech, high-touch profession provides the opportunity to deliver high-quality patient care and comfort while working with technologically sophisticated equipment. Therapists develop treatment plans, and observe and evaluate patient's clinical progression. Once a radiation oncologist has ascertained that the patient will benefit from radiation it is the therapists'



responsibility to ensure the patient receives the prescribed dose to the designated site. Imaging studies of the targeted area are taken in the simulator then the planning therapists generate a plan for treatment delivery. Patient positioning and plan parameters must be reproducible for each day of the course of treatment. Daily treatments consist of positioning the patient and equipment, monitoring the patient and administering the radiation treatment. **Therapists must be accurate, be able to take initiative, have the ability to work independently or as part of a**

team and most importantly enjoy working with people. Equally important is attention to detail. When positioning a patient we are working to tolerances within millimeters.

Radiation therapy is quickly becoming a technologically advanced discipline. The days of designing and pouring blocks of cerrobend for patient shielding are now done with multi-leaf collimation built into the head of the machine. Four field treatment techniques for pelvis patients are being replaced with complicated IMRT plans, and some centers have their own surgical suites for performing Stereotactic Radiosurgery. On the planning front we see PET/CT Fusion imaging helping us create better dose uniformity with a minimal amount of healthy tissue in the field.

With an aging population and increasing sophistication of radio-therapeutic equipment, radiation therapists generally work in hospitals or clinics will continue to be in demand across the country. Therapists generally work in hospitals or clinics and new centres continue to be built or upgraded throughout Canada. There are 1315 registered radiation therapists in Canada with 69 therapists working in Manitoba. At present there is only one employer, CancerCare Manitoba, but a new centre



is slated to open in Brandon within the next 2 years.

Due to strict radiation protection regulations most centers have the treatment area either separated from other departments or located in the basement. This allows for maximum radiation shielding to protect staff, patients and the general public.

Working hours are generally day shifts. Here in Winnipeg we work 8:00 a.m. to 4:15 p.m. with a Saturday on-call shift from 9:00 a.m. to noon. Occasionally an emergent patient will arrive in the department requiring immediate treatment. This does not always occur during the day and callbacks at 2:00 a.m. are not unheard of.

Therapists spend much of their day on their feet. An average machine will treat 30 patients a day and there is a lot of walking from the control area into the vault. A strong back and upper body is required to assist patients on and off the treatment couch and also for daily positioning. **Therapists need to use critical thinking and problem solving skills on a regular basis, and the ability to multitask and effectively communicate with staff and patients is very important.**

Currently in Manitoba the radiation therapy program runs for 28 consecutive months resulting in a diploma exit. It is a joint venture between CancerCare and Red River College with 90% of the classroom and clinical time spent at CancerCare. Prerequisites are University 1 and include Sociology, Anatomy & Physiology, Physics, Statistics and a written 'communication course. Students must also acquire a current St. John's First Aid certificate.

Upon completion of the program, therapists are required to pass a national competency based exam through CAMRT. Yearly licensing with CAMRT and MAMRT is required for employment.

