Medical Dosimetrists

Medical dosimetrists, in collaboration with radiation oncologists and medical physicists, generate radiation dose distributions and dose calculations to design radiation treatment plans that will deliver a prescribed dose of radiation to a defined anatomic area.

Career Description
Medical dosimetrists apply knowledge of anatomy and physiology, oncologic pathology, radiation biology, radiation oncology techniques, treatment planning and dosimetry procedures, and computer computation in the performance of their duties. The medical dosimetrist is responsible for designing a radiation oncologist (physician)-prescribed course of treatment, considering dose-limiting structures and the need for special casts and immobilization devices. They must be able to communicate effectively.

Medical Physics
A related field to medical dosimetry is medical physics, an applied branch of physics that uses the concepts and methods of physics in diagnosis and treatment of human disease. It is allied with medical electronics, bioengineering, and health physics. Professionals in this field ensure radiation safety and helping to develop improved imaging techniques (eg, mammography CT, MR, and ultrasound). They also contribute to development of therapeutic techniques (eg, prostate implants, stereotactic radiosurgery), collaborate with radiation oncologists to design treatment plans, and monitor equipment and procedures to ensure that cancer patients receive the prescribed dose of radiation to the correct location. (Source: American Association of Physicists in Medicine; available at www.aapm.org/publicgeneral/default.asp)

Employment Characteristics
Medical dosimetrists are employed in health care facilities, including hospitals, cancer centers, and private offices. They are also employed in settings where their responsibilities focus on education, management, research, and sales.

Salary
Salaries and benefits vary with experience and employment location but are competitive with other health specialties. Data from the 2010 Wage and Salary Survey of the American Society of Radiologic Technologists (ASRT) indicate that the average salary for practitioners with less than two years of experience is $54,528; the overall average is $95,279.

For more information, refer to www.ama-assn.org/go/hpsalary.

Educational Programs
Length. Program length varies, depending on program design, objectives, and the degree or certificate awarded.

Curriculum. Most programs require prerequisite work in radiation therapy or radiation physics. The competency-based curriculum of an accredited program includes extensive components of professional and structured clinical courses. Interested individuals should contact a particular program for information on specific courses and prerequisites.

Inquiries
Careers/Curriculum
American Association of Medical Dosimetrists
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www.medicaldosimetry.org

Certification/Registration
Medical Dosimetrist Certification Board
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Program Accreditation
Joint Review Committee on Education in Radiologic Technology
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