



In my role as President of the American Association of Medical Dosimetrists (AAMD), I encourage people to examine Medical Dosimetry as a career that is challenging and ever evolving. Like the rest of the medical field, the core of Medical Dosimetry is about helping others. As a 30-year practitioner, it is this often overlooked facet that still makes me proud to go to work each day. Don't misunderstand me. I love working with the emerging new technologies and having the opportunity to work closely with physicians, physicists and therapists on a daily basis. In the end, however, Medical Dosimetry is about assisting our patients through a most difficult time in their lives.

Take a few minutes to review the enclosed material and don't hesitate to contact the AAMD for further information about how you can join this exciting profession.

Sincerely,

*Christopher J. Moore, BS, CMD
AAMD President*

A Career Path Overview:

Medical Dosimetry

Planning for Your Future

what is a Medical Dosimetrist?

A Medical Dosimetrist is a key member of the radiation oncology team who has knowledge of the overall characteristics and clinical relevance of radiation oncology treatment machines and equipment and has the education and expertise necessary to generate radiation dose distributions and dose calculations in collaboration with a medical physicist and radiation oncologist.

In other words, the Medical Dosimetrist uses computer software to design radiation plans to treat both cancerous and benign diseases using external x-ray beams and internal radiation sources. They try to avoid normal structures yet give the target a high dose of radiation. They work closely with physicians, therapists and physicists to ensure a high quality treatment and patient care.



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what does a

Medical Dosimetrist do?

Medical Dosimetry is an exciting and amazing profession to work in! Medical Dosimetrists impact cancer survivorship on a daily basis.

After the radiation oncologist has consulted with the patient on a plan of treatment, he/she will write a prescription of radiation dose to a defined tumor volume. The Medical Dosimetrist designs a treatment plan by means of a computer to determine a treatment field technique that will deliver the prescribed radiation dose while taking into consideration the dose-limiting structures.

The Medical Dosimetrist maintains a delicate balance between delivering the prescription that the physician has written while ensuring the patient will not lose important healthy organ function. Using CT scan images, alone or in combination with MRI or PET images, planning is completed with 3-D computers that allow for the delivery of higher doses of radiation to a tumor while lowering the doses to the sensitive structures around it.

In some environments, Medical Dosimetrists play a part in cutting-edge clinical research for the development and implementation of new techniques in cancer treatment. The Medical Dosimetrist performs calculations for the accurate delivery of the radiation oncologist's prescribed dose, documents pertinent information in the patient record, and verifies the mathematical accuracy of all calculations using a system established by the medical physicist. They perform, or assist in, the application of specific methods of radiation measurement and provide support to the department in radiation protection, qualitative machine calibrations, and quality assurance of the radiation oncology equipment. Also, they often take on the role of educator in facilities that have radiation oncology residents, radiation therapy students or Medical Dosimetry students. Dosimetrists also get involved directly with patient care by assisting in setting up the patients for their planning sessions as well as their daily set-up.

what makes a good

Medical Dosimetrist?

A Medical Dosimetrist has an understanding of the technical aspects of radiation oncology and medical physics to meticulously derive computerized treatment plans, communicate these aspects to the radiation oncologist for approval, and relay that information to the radiation therapists for plan implementation.

Medical Dosimetrists take many different pathways to the profession, but one of the most common is through radiation therapy. After becoming an ARRT certified radiation therapist, many individuals will continue their education and enroll in a Medical Dosimetry education program. For more information on the career pathways to becoming a Medical Dosimetrist, visit www.medicaldosimetry.org.

- Good oral and written communication skills for interacting with physicians, physicists, therapists, dosimetrists, patients and patients' family members
- Working knowledge of radiation safety and regulations
- Understanding of medical imaging and radiation therapy technology
- Ability to interpret and execute treatment plans as defined in relevant treatment protocols
- Good math and anatomy skills, with ability to visualize the three-dimensional concepts needed for the planning process
- Experience and confidence with computer operations and functions
- Excellent analytical skills and an ability to critically evaluate data

Learn more about becoming a

Medical Dosimetrist

For more information about Medical Dosimetry, please visit www.medicaldosimetry.org, the official website of the American Association of Medical Dosimetrists (AAMD).

There are a number of Medical Dosimetry programs in the United States that are certified by the Joint Review Committee on Education in Radiologic Technology (JRCERT). For a listing of those programs, visit www.jrcert.org.

The Medical Dosimetrist Certification Board (MDCB) sets the standards for eligibility for the certification exam. The eligibility requirements are listed on the MDCB website at www.mdc.org.

