

WHAT IS A MEDICAL PHYSICIST ASSISTANT?

A Medical Physicist Assistant (MPA) focuses on the quality improvement and management of imaging and/or treatment systems in a hospital or clinical setting. An MPA has completed relevant didactic education (Bachelor's or higher college degree from an accredited college or university and/or certification in a related specialty such as radiation therapy, radiology, nuclear medicine, or health physics) and has attained practical clinical medical physics knowledge through specific training and appropriate demonstration of competency under the supervision of a Qualified Medical Physicist (QMP). Just as there are varied classes of QMPs, there are also a variety of types of MPAs. An MPA may specialize in radiation therapy, diagnostic imaging, nuclear medicine, or some combination thereof. While the specific activities vary with each sub-specialty, each aims to improve the quality of medical care and diagnosis through the application, testing, and maintenance of the involved medical technologies.



What Kinds of Things Does an MPA Do?

Depending on the sub-field and clinical setting, an MPA can expect to:

- Perform periodic quality control (QC) of imaging and therapeutic devices to ensure radiation dose and image quality are appropriate for the task
- Perform patient-specific dosimetric measurements, e.g., intensity modulated radiation therapy (IMRT) quality assurance (QA), assay radioactive sources
- Develop and monitor data analysis and statistical tools that track system accuracy and performance
- Assist in the creation of safety and quality training for hospital personnel
- Work with the Radiation Safety Office
- Characterize and understand the application of current and new technology within a hospital setting
- Work in companion fields that include 3D printing, coding, machine learning, and artificial intelligence.
- Design projects that aim to answer a clinical problem

Who Can Become an MPA?

The education and work backgrounds of MPAs are as diverse as the clinical work. Common backgrounds include engineering and/or physics majors, health physicists, radiologic technologists (RT), radiation

therapists, nuclear medicine technologists, sonographers, imaging informaticists, and dosimetrists. Because of the close working relationship between MPAs and QMPs, the professional association for Medical Physicists — **the American Association of Physicists in Medicine (AAPM)** — is working to formalize activities and resources that may be of value to current and future MPAs.

What Exactly is AAPM?

AAPM is a professional society whose mission is to advance medicine through excellence in the science, education, and professional practice of medical physics. Its members, numbering over 8,600 globally, primarily consist of individuals working in medical imaging, radiation therapy, or nuclear medicine departments, regulatory agencies, or industry. Many of the activities of AAPM are volunteer-led and offer tremendous opportunities for professional growth and networking. AAPM develops and maintains a vast array of scientific and clinical resources that define technical procedures, professional practice, and provide educational content. Membership offers access to many scientific publications including *Medical Physics*, *Journal of Applied Clinical Medical Physics*, *Physics Today*, and online technical publications. AAPM also has relationships with a multitude of organizations including the ASRT, ARRT,

ISMRM, AAMD, and the RSNA.* National and regional AAPM meetings are held throughout the year and offer an in-person and/or virtual setting for learning and collaboration with peers and vendors.

What Can the AAPM Do For You?

AAPM is working to formalize activities and resources that will be of value to MPAs, creating a new membership category with reduced annual dues. Other member benefits include:

- Full access to the AAPM website and Newsletter
- Online Learning Center and Virtual Library
- Opportunities for continuing education credits
- Reduced fees for AAPM meetings
- Free access to RSNA meetings
- Access to medical/health physics related journals, reports, practice guidelines, and technical standards
- Membership Directory
- Career Services
- Annual Professional Survey
- Government and regulatory advocacy

* Footnote:

ASRT – American Society of Radiologic Technologists
 ARRT – American Registry of Radiologic Technologists
 ISMRM – International Society of Magnetic Resonance in Medicine
 AAMD – American Association of Medical Dosimetrists
 RSNA – Radiological Society of North America

If you are interested in learning more about MPAs or AAPM membership, please visit us at www.aapm.org.