

Roles and Responsibilities of the Medical Health Physicist

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Disclosure Statement

- ▶ Nothing to Disclose
 - ▶ No Conflicts of Interest
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Report of AAPM Task Group 386: Medical Physics Practice Guideline 16.a: Medical Health Physics Scope of Practice

- ▶ Joint Task Group of AAPM* and HPS** Members:
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*AAPM-American Association of Physicists in Medicine

**HPS-Health Physics Society

Definition of Medical Health Physics (MHP)


- MHP lies at the intersection of Health Physics and Medical Physics.
- In general, can be described as that area of HP that is concerned with the protection of healthcare workers, members of the public and patients from unwarranted radiation exposure received in a medical environment.
- A Qualified Medical Physicist (QMP) must be knowledgeable in the principles of radiation protection and familiar with the variety of radiation applications in medicine.
- This document aims to describe and enumerate the scope of responsibility for an MHP QMP operating primarily in the role of a radiation safety professional.



Background



- ▶ Early days of medical radiation use, radiation protection practices were limited, inadequate and unevenly applied by the medical community.
- ▶ Following development of medical physics and health physics professions, medical radiation protection evolved into a formal discipline.
- ▶ Medical Health Physics is now considered a subspecialty of both medical physics and health physics.



Intended Users of the *Medical Physics Practice Guideline (MPPG)*

- QMP when determining an overall scope of practice for the performance of medical health physics activities.
- Administrators, regulators, and accreditation bodies to identify the necessary qualifications for individuals performing medical health physics activities.
- This document to be reviewed every 5 years and updated as needed.
- Document discusses typical duties and minimum level of responsibility/involvement an MHP/QMP should provide.



Qualifications and Responsibilities

- Most MHPs possess a graduate level degree, specialty board certification, and 3-5 years of relevant experience.

- **Education:**

Highly recommended that all future MHP QMPs possess a graduation degree in either health physics, medical physics or a closely related field

- **Board Certification:**

Board certification signifies that an individual is a skilled and knowledgeable domain expert.

Qualifications and Responsibilities

- **Board Certification** establishes minimum standards for educational, ethical, and clinical training which aids in comparing and assessing professional competency due to different training and experience.
- For **Health Physicists**, the American Board of Health Physics (ABHP) offers the Certified Health Physicist's Certification (CHP). CHP credential indicates that the diplomate is proficient in applying radiation protection principles and techniques across a wide variety of radiation industries though they typically possess specialized experience in one or more radiation industry fields.

Qualifications and Responsibilities

- Clinical Medical Physicists operate exclusively in the medical domain and are highly specialized in a particular subfield of medical physics. Each subfield has a separate board certification process.
- The American Board of Radiology (ABR) oversees certification for medical physicists in the fields of Therapy Medical Physics, Diagnostic Medical Physics and Nuclear Medicine Medical Physics and is the primary certification pathway for most medical physicists.
- With respects to the medical health physics field, the American Board of Medical Physics offers a certification in Medical Health Physics, while the American Board of Science in Nuclear Medicine offers certifications in (1) Radiation Protection and (2) Nuclear Medicine Physics and Instrumentation



Experience

- The MHP field does not possess a dedicated residency training program. It often takes many years beyond minimum board certification requirements to gain applicable experience in all medical radiation use areas.
- It is incumbent upon the potential MHP QMP to only oversee, manage, and operate within their areas of expertise.
- It is important that the MHP QMP obtain the necessary training and board certification to fill any voids in their own training and experience pathway.

Appendix: Scope of Practice Combined Task List

Task Description (General)	Sub-Task(s)	Activity MUST be performed by a MHP QMP	Activity must be performed or supervised by MHP QMP	Activity SHOULD include a MHP QMP	Amplifying Information
Decommissioning implement MultiAgency Radiation Survey and Site Investigation Manual (MARSSIM) processes and procedures	* Identify isotopes contributing to contamination			X	
	* Calculate derived concentration guideline levels (DCGLs)		X		
	* Develop plan to remove contamination below DCGLs			X	
	Supervise cleanup work and survey site to ensure remaining contamination, if any, is below DCGLs			X	

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Task Description (General)	Sub-Task(s)	Activity MUST be performed by a MHP QMP	Activity must be performed or supervised by MHP QMP	Activity SHOULD include a MHP QMP	Amplifying Information
Radiation protection program management		X			
Ensure compliance with laws, regulations, and policies and procedures				X	



Conclusions

- MHP lies at the intersection of Health Physics and Medical Physics.
- Medical Health Physics is that field of expertise that is concerned with the protection of healthcare workers, members of the public and patients from unwarranted radiation exposure received in a medical environment.

Qualified Medical Health Physicists may come from either Medical Physics or Health Physics backgrounds but each must have comprehensive training.

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