



AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

Advancing the Science, Education & Professional Practice of Medical Physics

MEDICAL PHYSICIST ASSISTANTS IN THERAPY

Per Halvorsen
2016 AAPM Spring Clinical Meeting



Outline

- Macro environment
- AAPM Board directive & AAPM policy
- MPPG working group deliberations
- Excerpts from MPPG draft



Macro environment

- Pressure on cost
- Lack of licensing & regulatory mandates for QMPs
- Precedents in healthcare
- Complexity – need for delegation to allow QMP to focus on higher-level professional work



Licensing & regulatory

- Only 4 states have licensure to protect scope of work that can only be performed by LMPs
- Most states limit regulatory mandate for QMPs to annual linac calibrations
- Accreditation programs do not mandate minimum physicist staffing levels



Precedents

- Radiologist assistants
- Non-physician practitioners – CNPs, PAs
- Nursing model – RNs, LPNs, CNAs

Radiologist Assistants

Radiologist Assistant Role Delineation

January 2005



Background

The American Registry of Radiologic Technologists (ARRT) is developing a certification program for a new level of imaging technologist called the Radiologist Assistant (R.A.). A consensus statement developed by the American College of Radiology (ACR) and the American Society of Radiologic Technologists (ASRT) proposed that the R.A. is an advanced-level radiographer who works under the supervision of a radiologist to promote high standards of patient care by assisting radiologists in the diagnostic imaging environment. Under radiologist supervision, the R.A. performs patient assessment, patient management, and selected clinical imaging procedures. Certification as an R.A. does not qualify the R.A. to perform interpretations (preliminary, final, or otherwise) of any radiological examination.¹

Nursing model



Joint Statement on Delegation American Nurses Association (ANA) and the National Council of State Boards of Nursing (NCSBN)

Introduction

There is more nursing to do than there are nurses to do it. Many nurses are stretched to the limit in the current chaotic healthcare environment. Increasing numbers of people needing healthcare combined with increasing complexity of therapies create a tremendous demand for nursing care. More than ever, nurses need to work effectively with assistive personnel. The abilities to delegate, assign, and supervise are critical competencies for the 21st century nurse.

In 2005, both the American Nurses Association and the National Council of State Boards of Nursing adopted papers on delegation.¹ Both papers presented the same message: delegation is an essential nursing skill. This joint statement was developed to support the practicing nurse in using delegation safely and effectively.



Complexity

- Increased utilization of SRS&SBRT
- Increased frequency of re-treatments
- More imaging data, more advanced dose & registration algorithms
- More advanced motion management & IGRT

AAPM board directive

American Association of Physicists in Medicine
Board of Directors Meeting
July 24, 2014 - 1:00 PM – 6:00 PM
Austin Hilton – Governor's Ballroom
Austin, Texas

181

Action Item: BE IT MOVED: That the AAPM work to develop an appropriate policy and guidance related to the role, training and supervision of Medical Physicists Assistants (MPAs) in supporting clinical medical physics work under the supervision of a Qualified Medical Physicist. Such guidance shall included, but may not be limited to:









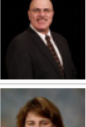
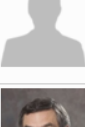

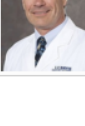


- 1. Developing a Medical Physics Practice Guideline on supervision for MPAs and other support staff (lead: Professional Council).**
- 2. Developing an AAPM Position Statement on the appropriate role, training and supervision of MPAs (lead: Professional Council).**
- 3. Interacting with regulatory and licensing bodies and with other professional societies to advocate for the AAPM's position related to the appropriate role, training and supervision of MPAs (lead: Administrative Council).**
- 4. Developing the educational curriculum for MPAs (lead: Education Council).**

Motion was seconded and approved; 31 yes, 0 no, 1 abstain.

AAPM Professional Policy

POLICY NUMBER	POLICY NAME	POLICY DATE	SUNSET DATE
PP 29-A	Medical Physicist Assistants: Task Delegation and Supervision	2/22/2015	12/31/2020
Policy source			
AAPM Board of Director's Online Vote			
Policy text			
<p>A Qualified Medical Physicist (QMP) is an individual who is competent to independently provide clinical professional services in one or more of the subfields of medical physics, including Diagnostic Medical Physics, Nuclear Medical Physics, Therapeutic Medical Physics, or Medical Health Physics. QMPs have met academic and training requirements, and have been granted certification in a specific subfield(s) of medical physics by an appropriate certification body as described in AAPM Professional Policy 1¹.</p> <p>Some institutions may use the services of an individual who is not a qualified medical physicist for certain clinical activities. The services they provide and the location where they provide these services are limited based on safety and patient care considerations and the availability of direct or personal QMP supervision where necessary.</p> <p>The Medical Physicist Assistant (MPA) is an individual who has completed relevant didactic education (Bachelor's or higher college degree from an accredited college or university and/or certification as a Radiologic Technologist or Radiation Therapist), and has attained practical clinical medical physics knowledge through specific training and technical experience in a program supervised by a QMP. The MPA performs tasks in support of a QMP in the professional practice of clinical medical physics. In all such circumstances, the MPA must be appropriately supervised and the range of tasks must be carefully defined by a QMP who is certified in the same subfield of practice in which the MPA is working. Levels of supervision provided (personal, direct, or general) will vary depending on the specific task, experience of the MPA and professional judgment of the QMP supervisor in accordance with guidance of the forthcoming Medical Physics Practice Guideline on this subject. All medical physics tasks performed by the MPA must be reviewed in a timely manner, and reports must be co-signed by the QMP supervisor, who assumes full responsibility and liability for the submitted content.</p>			

MPPG 7: MPAs

VOTING Appointments	
 <p>Anthony P. Blatnica, MS tblatnica@gmail.com 3/14/2014 Member C I</p>	 <p>Jessica B. Clements, MS JessicaClements@gmail.com 3/14/2014 Member C I</p>
 <p>Per H. Halvorsen, MSc Per.H.Halvorsen@lahhey.org 3/14/2014 Member C I</p>	 <p>Michael G. Herman, PhD herman.michael@mayo.edu 3/14/2014 Member C I</p>
 <p>Jennifer Lynn Johnson, MS Ms_JLJohnson@yahoo.com 7/9/2014 Member C I</p>	 <p>Melissa Carol Martin, MS melissa@therapyphysics.com 7/9/2014 Member C I</p>
 <p>Jatinder R. Palta, PhD jatinder.palta@vcuhealth.org 3/14/2014 Member C I</p>	 <p>Douglas E. Pfeiffer, MS xraydoug@me.com 3/14/2014 Member C I</p>
 <p>Robert J. Pizutielle Jr., FACR, MS bobp@upstatemp.com 3/14/2014 Member C I</p>	 <p>Thomas Ruckdeschel, MS truckdeschel@linmedphys.com 7/9/2014 Member C O I</p>
 <p>Beth A. Schueler, PhD schueler.beth@mayo.edu 3/14/2014 Member C I</p>	 <p>J. Anthony Seibert, PhD jaseibert@ucdavis.edu 3/14/2014 Task Group Chair C I</p>
 <p>George W. Sherouse, PhD GWS@GWSherouse.com 12/12/2014 Member C I</p>	
NON-VOTING Appointments	
 <p>Joann I. Prisciandaro, PhD joannp@med.umich.edu 8/6/2014 Liaison - Education Council (nonvoting) C I</p>	

- 14 members
- Equal imaging/therapy
- Diverse practice settings
- Diverse perspectives on MPAs

MPPG 7 deliberations

- Prescriptive (list of tasks), or defer to the local QMP's professional judgment?
- Levels and nature of supervision – QMP on site?
- Define certain parts of medical physics Scope of Practice as “no go zones”?
- **Ratios of MPAs to QMPs**

MPPG 7 *DRAFT* excerpts

1. Introduction

The design and management of a medical physics practice within a healthcare organization must be principally the responsibility of a Qualified Medical Physicist (QMP). Taking into account local circumstances and resources, there may be certain tasks within the program that the QMP determines can be delegated to a Medical Physicist Assistant (MPA) under the QMP's supervision. Such delegation does not absolve the QMP of legal, ethical or other professional responsibility for the quality of the medical physics practice. The delegated task is in all ways the responsibility of the QMP.

MPPG 7 *DRAFT* excerpts

- b. **Medical Physicist Assistant (MPA)** – An individual working in a capacity that is not fulfilled by other scope of work, (e.g., radiologic technologist, medical dosimetrist) who works under the supervision and responsibility of a QMP.
- e. **Supervision** - Oversight of and acceptance of responsibility for the medical physics-related work performed by an MPA:
 - i. **General Supervision** – The medical physics activity is performed under a QMP’s overall direction and control but the QMP’s presence is not required during the performance of the medical physics activity (e.g., survey, testing or data collection). Under General Supervision, the training of the personnel who actually perform the medical physics activity and the maintenance of the necessary equipment and supplies are the continuing responsibility of the QMP.
 - ii. **Direct Supervision** – A QMP must exercise the direction, control and training specified under General Supervision and be present in the facility and immediately available to furnish assistance and direction throughout the performance of the medical physics activity. It does not mean that the QMP must be present in the room when the medical physics activity is being performed.
 - iii. **Personal Supervision** – A QMP must exercise the direction, control and training specified under General Supervision and be present in the room during the performance of the medical physics activity.

MPPG 7 *DRAFT* excerpts

A QMP must not delegate a task to an MPA that would increase the risk of harm to the patient, personnel and the public. In determining if a task can be delegated, the QMP takes into account the likelihood of error, the severity of the impact of potential error, and the likelihood that an error would go undetected. In addition, all of the following criteria must be met:

- For collecting data, baseline measurements have been performed and protocols have been established by a QMP.
- The MPA has demonstrated competence for the specific task.
- The MPA complies with the supervision plan determined by the QMP.

When a QMP decides to delegate tasks to an MPA, the professional responsibility for the medical physics-related tasks performed by the MPA remains with the QMP. Supervision of an MPA requires periodic interactions between the QMP and the MPA. Depending on the task assigned, these interactions could be daily, weekly, monthly, etc. and face-to-face or by phone or video conference. The frequency and type of interaction must be decided by the QMP upon delegation of the task. The QMP **must** still review and sign all tasks and work products of the MPA. In no circumstances can the authority to sign be delegated when the work is performed by the MPA. The record should indicate who actually collected the information and who prepared the report. Overall responsibility for the supervision plan resides with the QMP.

MPPG 7 *DRAFT* excerpts

Table 1: Medical Physicist Assistant Supervision Ratios

Practice	Supervision Ratio
Diagnostic Medical Physics	No more than 1 FTE MPA per 1 clinical FTE QMP*
Nuclear Medical Physics	No more than 1 FTE MPA per 1 clinical FTE QMP*
Therapy Medical Physics	No more than 0.25 FTE MPA per 1 clinical FTE QMP.**

* A higher ratio may be used for specific modalities provided a written justification is documented by a QMP. In no case should the ratio exceed 4 MPAs per 1 QMP.

** It is inappropriate to use an MPA in a practice setting with < 1 FTE QMP per location.

It is the responsibility of all healthcare staff to be familiar with the federal and state regulations that may take precedence over the recommendations in this document. It must also be recognized that billing for professional services often entails an implied or explicit requirement that the services are provided by a qualified medical physicist; failure to provide the appropriate level of QMP engagement is unethical^{2,3} and may be deemed illegal.

MPPG 7 *DRAFT* excerpts

7. Competency

The QMP designs and implements a formal and well-documented structure for the MPA to demonstrate the ability to fulfill each task to be delegated. Task-specific expectations of competency must be formally defined in writing by the QMP for each assigned task. The MPA must demonstrate the ability to *consistently, correctly and accurately* perform each task, and must therefore perform the task under the QMP's personal supervision in order to establish competence to the satisfaction of the QMP. Documentation of competence for each delegated task must be maintained by the QMP, and competence should be reviewed at least annually through direct or personal supervision. Individuals who have not yet formally demonstrated competency in specific tasks must be under the personal supervision of the QMP. If periodic review through audit or examination reveals an erosion of competency, then an adjustment of the supervision plan is indicated until such time as the competency can be re-established.