

 AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE
Advancing the Science, Education & Professional Practice of Medical Physics

**HISTORY, INTENT, AND PROGRESS OF THE AAPM
 PRACTICE GUIDELINE EFFORT**

Per Halvorsen
 2017 AM

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Disclosures

None





Outline

- Macro environment
- AAPM's initiative for practice guidelines (MPPGs)
- Early experience with MPPG initiative





Macro environment

- Lack of clarity re. minimum standards vs best practice – inappropriate adoption of TG reports “in whole”
- No consistent requirement for medical physics support in accreditation programs
- Different practice environments – need to define a common “baseline”





TG reports:

- Intended to be a technical reference for medical physicists, not intended for regulations
- Compendia of the known science, not consensus practice guidelines
- Not updated regularly





Accreditation programs:

- Required for non-hospital advanced imaging services through MIPPA; encouraged for all clinics by ACR, ASTRO, AAPM (PP-27)
- No consistent medical physics requirements



Accreditation programs – PP27

POLICY NUMBER	POLICY NAME	POLICY DATE	SUNSET DATE
PP 27-A	Accreditation of imaging and radiation therapy facilities	4/19/2013	12/31/2018

Policy source

Policy text

The American Association of Physicists in Medicine (AAPM) believes that accreditation of imaging and radiation therapy services by nationally recognized accrediting programs serves the best interests of patients. AAPM supports conditioning healthcare payments on accreditation status after an appropriate time interval for facilities and accrediting programs to complete the accreditation process. Accreditation must specify qualifications and roles for personnel, including a Qualified Medical Physicist as defined by Professional Policy PP 1.



MPPG initiative

- Developed by AAPM Professional Council, presented to Board in 2011
- Intended to define the minimum level of medical physics support deemed appropriate to support a given clinical service
- Rigorous review and consensus-seeking development method; 5-year renewal cycle



Board approval

Not required by AAPM Rules, but sought in the interest of building consensus for MPPGs:

American Association of Physicists in Medicine
 Board of Directors Meeting
 August 4, 2011 1:00 PM – 6:00 PM
 Vancouver Convention Center (East)
 Vancouver, British Columbia
 CANADA

243	Professional Council Halvorsen stated that the Professional Council written report is included in the Board Bulletin.
245	Motion: The AAPM Board of Directors approves the proposal for Medical Physics Practice Guidelines, as approved by the Professional Council and described in the document named "Proposal for Medical Physics Practice Guidelines - final – PC approved 6-2-11". Motion carried unanimously.



MPPG history

- Concept and proposal developed by AAPM Professional Council 2009-2010
- Board motion approved in 2011
- SC on Practice Guidelines formed in 2012
- First Guideline published in 2013
- First 5-year MPPG revision due in 2018



MPPG vision

- AAPM takes lead on developing guidelines for medical physics
- Peer-reviewed, open-access
- Accrediting programs, regulators and legislators will be encouraged to reference MPPGs when defining their respective requirements



MPPG scope

- Describe minimum level of medical physics support in any practice setting for specific clinical services
- "Support" includes staffing, equipment, machine access, training, and SOPs
- Not intended to replace Task Group reports



Context: JACMP Editorial

JOURNAL OF APPLIED CLINICAL MEDICAL PHYSICS, VOLUME 14, NUMBER 6, 2013

Medical Physics Practice Guidelines – The AAPM's minimum practice recommendations for medical physicists

This issue's editorial is an invited commentary authored by Maria F. Chan, Joann I. Prisciandaro, S. Jeff Shepard, and Per H. Halvorsen. It discusses an essential question for practicing medical physicists: What are minimum practice standards and recommendations for clinically active medical physicists? The topic is both timely and essential, as the AAPM and JACMP are beginning to publish community practice standards. This editorial sets the framework and focus of these important articles.

Michael D. Mills, PhD
Editor-in-Chief



Supervision

- Foundational – scope of practice, responsibility for delegated tasks, competency, levels of supervision
- CMS' definitions (General, Direct, Personal) are widely adopted in medicine
- AAPM PP-18 adopts CMS definitions for clinical medical physics
- MPPG 4: MP Residents
- MPPG 7: MPAs, other assistants



Key priorities

- Appropriate deference to each clinic's QMP and Medical Director
- Describe minimum levels of professional supervision
- Set a clear expectation of institutional commitment/support for appropriate resources
- Scope of medical physicist's role
- Minimum routine QA (equipment & process QA)



Publication of MPPGs

- JACMP – open access – special section for AAPM Reports
- Also posted on AAPM website at: www.aapm.org/pubs/MPPG



Published Guidelines

- AAPM Medical Physics Practice Guideline 8.a.: Linear accelerator performance tests published in the *Journal of Applied Clinical Medical Physics* (JACMP), Volume XX, Number X [Early View] (2017).
- AAPM Medical Physics Practice Guideline 6.a.: Performance characteristics of radiation dose index monitoring systems published in the *Journal of Applied Clinical Medical Physics* (JACMP), Volume XX, Number X [Early View] (2017).
- AAPM Medical Physics Practice Guideline 5.a.: Commissioning and QA of Treatment Planning Dose Calculations — Megavoltage Photon and Electron Beams published in the *Journal of Applied Clinical Medical Physics* (JACMP), Volume 16, Number 5 (2015). [ISBN: 978-1-936366-48-4]
- Medical Physics Practice Guideline 4.a.: Development, implementation, use and maintenance of safety checklists published in the *Journal of Applied Clinical Medical Physics* (JACMP), Volume 16, Number 3 (2015). [ISBN: 978-1-936366-46-0]
- AAPM Medical Physics Practice Guideline 3.a.: Levels of supervision for medical physicists in clinical training published in the *Journal of Applied Clinical Medical Physics* (JACMP), Volume 16, Number 3 (2015). [ISBN: 978-1-936366-45-3]
- AAPM Medical Physics Practice Guideline 2.a.: Commissioning and quality assurance of X-ray-based image-guided radiotherapy systems published in the *Journal of Applied Clinical Medical Physics* (JACMP), Volume 15, Number 1 (2014). [ISBN: 978-1-936366-31-6]
- AAPM Medical Physics Practice Guideline 1.a.: CT Protocol Management and Review Practice Guideline published in the *Journal of Applied Clinical Medical Physics* (JACMP), Volume 14, Number 5 (2013). [ISBN: 978-1-936366-27-9]

- 3 others in review



Progress

- 5-year program review recently completed
- New Subcommittee Chair, “program refresh” underway
- MPPGs have begun to be adopted as reference material in ACR Practice Parameters / Technical Standards and accreditation programs including The Joint Commission


