How we got here:

- AAPM’s history of Task Group work & reports
- ACR’s history of Technical Standards & Practice Guidelines
- Focus on medical errors and role of regulations
- Requirements for clinic accreditation
- Multiple accrediting entities

Medical Physics Practice Guidelines

- Focus on medical errors and role of regulations
- Requirements for clinic accreditation
- Multiple accrediting entities

Medical Physics Practice Guidelines:
The AAPM Minimum Practices
Recommendations for Medical Physicists

Mario Chan and Joana Priscandaro
Co-Chairs, Subcommittee of Practice Guidelines, AAPM

55th Annual Meeting of AAPM, August 8, 2013, Chicago

Outline

- How we got here:
  - AAPM’s history of Task Group work & reports
  - ACR’s history of Technical Standards & Practice Guidelines
  - Focus on medical errors and role of regulations
  - Requirements for clinic accreditation
  - Multiple accrediting entities

ACR Documents

- Developed through a consensus-focused process with broad representation by different practice environments
- Aim to define a minimum practice standard
- Significant physician influence
- Devoid of much specificity

MIPPA

- Medicare Improvements for Patients and Providers Act of 2008:
  - Signed into law in July 2008
  - Requires practice accreditation for the “advanced imaging” modalities which include CT, MR, and Nuclear Medicine
  - Does not include x-ray, fluoroscopy, sonography, or anything in radiation oncology
  - Does not apply to hospitals

Accrediting Bodies Under MIPPA

- American College of Radiology
- Intersocietal Accreditation Commission
- The Joint Commission

The Problem/Concern

- All have different requirements for personnel
  - AAPM is on record indicating concern with not requiring board certification for medical physicists
ASTRO’s Position

Launching a significantly enhanced practice accreditation program and beginning the development of additional accreditation modules specifically addressing new, advanced technologies such as IMRT, SBRT and brachytherapy.

ASTRO-AAPM: Patient safety

Special Article

Improving patient safety in radiation oncology
William R. Hendee PhD, Michael G. Herman PhD

ASTRO Calls for Mandatory Accreditation of All Advanced Imaging and Radiation Oncology Providers

The ACR believes Congress should expand the current MIPS, accreditation requirements for advanced imaging to include radiation therapy. In addition, the accreditation mandate should apply to all facilities, including hospital settings. Furthermore, the accreditation of these imaging and radiation therapy procedures should only be conducted by those accrediting bodies with expertise in and experience in the area for which they are accrediting.

ASTRO White Papers

Safety considerations for IMRT: Executive summary
Jay M. Novak PhD, Melannie Demong MD, Stephen Ellis MD, Benedict A. Frass RDMS, James M. Calvi RN, PhD, Geoffrey S. Gottfried PhD, Lawrence R. Hurwitz MD

ASRT White Paper

Radiation Therapy Safety: The Critical Role of the Radiation Therapist

Possible Result

- Multitude of accrediting entities, each defining their own QC/safety standards
- State regulations continue to reference Task Group reports, which may be inappropriate for some practice environments
Proposed Solution

- AAPM develops practice guidelines for medical physics, defining a minimum practice standard for a given scope of clinical service.
- Accreditation programs (and state regulations?) incorporate the AAPM practice guidelines rather than defining their own.

Medical Physics Practice Guidelines

AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE

INTRODUCTION

The American Association of Physicists in Medicine (AAPM) has long advocated a consistent level of medical physics practice, and has published many guidelines and position statements related to radiation therapy and simulation. These guidelines include recommendations on equipment standards, software, and treatment planning. In many cases, AAPM guidelines are adopted by accreditation programs and noted in the literature and regulatory documents. However, some of these guidelines may not be incorporated into the accreditation programs.

The AAPM will also lead the development of MPPGs in collaboration with other professional societies. MPPGs will be freely available to the general public. Accrediting organizations, regulatory agencies, and legislators will be encouraged to reference these MPPGs when defining their respective requirements.

TG Reports vs MPPGs

TG reports are:
- Intended to be technical reference for medical physicists – compendia of the known science on a topic.
- Written by a core group of subject-matter experts.
- Reviewed by subject-matter committee and approved by one Council.

MPPGs are:
- Developed following a structured process to become consensus practice guidance documents.
- Developed with cross-Council participation.
- Open for review/comment by ALL members.
- Intended to be adopted by regulatory agencies and accrediting entities.
- Updated regularly – sunset dates / revision #.
- Freely available to ALL – not just AAPM.

MPPG Vision & Scope

2. Vision

The AAPM will lead the development of MPPGs in collaboration with other professional societies. The MPPGs will be freely available to the general public. Accrediting organizations, regulatory agencies, and legislators will be encouraged to reference these MPPGs when defining their respective requirements.

3. Scope

MPPGs are intended to provide the medical community with a clear description of the minimum level of medical physics support that the AAPM would consider prudent in all clinical practice settings. Support includes but is not limited to staffing, equipment, machine access, and training. These MPPGs are not designed to replace extensive Task Group reports or review articles, but rather to describe the recommended minimum level of medical physics support for specific clinical services.

“Safety is No Accident”, ASTRO intersociety collaboration, June 2012.

Current MPPG Task Groups

- MPPG TG#1: CT protocol management and review
- MPPG TG#2: Commissioning and QA of x-ray based image guided radiotherapy systems
- MPPG TG#3: The development, implementation, use and maintenance of Safety checklists for Radiation Oncology
- MPPG TG#4: Levels of supervision in clinical medical physics
- MPPG TG#5: Commissioning and QA of External beam treatment planning system dose calculations

MPPG Development

<table>
<thead>
<tr>
<th>Scope</th>
<th>Review</th>
<th>Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>What</td>
<td>Peer review</td>
<td>Votes by PC</td>
</tr>
<tr>
<td>When</td>
<td>Open comment</td>
<td>Vote by PC</td>
</tr>
<tr>
<td>How</td>
<td>Summary</td>
<td>5 yrs cycle</td>
</tr>
</tbody>
</table>

MPPG Template

- Table of the guidelines
- Disclaimer
- Table of contents
- Summary of recommendations
- MPPG Task Group members
- Summary of peer review and lay of contributors
- Introduction
- Essential limitations and precautions

Structure of SPG

- Professional Council (PC)
- Clinical Practice (CPC)
- Subcommittee Practice Guidelines (SPG)

Diagnostic Imaging & Therapy

- MPPG TG#1: CT protocol management and review
- MPPG TG#2: Commissioning and QA of x-ray based image guided radiotherapy systems
- MPPG TG#3: The development, implementation, use and maintenance of Safety checklists for Radiation Oncology
- MPPG TG#4: Levels of supervision in clinical medical physics
- MPPG TG#5: Commissioning and QA of External beam treatment planning system dose calculations
**Definintions**
Staffing qualifications and responsibilities
Interactions with other team members

**Recommendations**
Required staff (FTE commitment)

**Implementation guidelines**
Minimum required resources and equipment
Staffing and support (MPP only)
Do’s and don’ts for your situation
Practical case scenarios, potential risk analysis

**Conclusion**
Continuing quality improvement

---

**Process for MPPG**
- Nominations of topics
- Formation of MPPG TG
- Commitment of MPPG
- Initial meeting and prelaunch recommendations
- Draft MPPG
- SPG review and decide if report ready for peer
- Peer reviewers made to the AAPM council
- The final version of MPPG will be published in JACMP.

---

**Acknowledgements**
Per Halvorsen
Lynne Fairbent
Daniel Pavord
Martin Fraser
and
All SPG Members