

AAPM 2012 and Beyond: Major Initiatives

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AAPM's "Big Rocks"



Expanding the shorthand: what does “AAPM” do?

- “AAPM” does very little – individual physicists “do” things
- AAPM is an organizational tool for cooperative work
- Through AAPM we help each other learn and adapt – so that patient care is safe, effective, and efficient

High degree of engagement

- 68 task group reports since 1999
- 70 active task groups
- 234 committees/workgroups/task groups
- 14.5% of AAPM members are part of some national group – does not count chapter involvement

Major Issues

- Adequate supply of qualified physicists
- Proper utilization of qualified physicists
- Practice standards and accreditation
- Sharing best practices
- Emphasis on safety

Adequate supply of qualified physicists

- Clinical physicists
- Scientists/innovators
- Educators
- Leaders/managers

Evolution of clinical practice qualifications

Qualified medical physicist = Board certification

Board certification will require accredited education and residency

Clinical practice will eventually require board certification (CARE, regs)

Reimbursement will/may require practice accreditation (MIPPA, etc.)

Where do we stand on residencies?

- Summer 2011:
 - Bruce Gerbi – 59 in therapy, 7 in imaging; 71 slots in therapy, 8-9 in imaging (update: 80 now, likely 100 by 2014)
 - Ed Jackson -- ~240 graduates (170 MS, 70 PhD), but 2:1 preference for PhD in residencies
- Issues
 - Lack of residencies, especially in imaging and for MS graduates

AAPM's role ...

- Provide guidelines for graduate programs and residencies (Reports 90, 133, 197 ...)
- **Promote residencies**
 - Provided funds to aid development of an imaging residency in a consulting group – documents are available
 - Working with RSNA to promote imaging residencies
 - Possibly: provide seed funding for imaging residencies
- Provide workforce needs estimates

AAPM's role ... education

- Provide opportunities for CE, SAMS
 - ~12 SAMS at Spring Clinical Meeting
- Work with CAMPEP and ABR to clarify and simplify processes where possible
- Develop (more) online resources
 - Virtual library
 - Online physics modules for medical residents

AAPM's role ... communication

- Strategic plan element: create a section of the AAPM website for members to share information
 - CT protocols
 - SRS cone factors
 - Failure mode analyses
 - Safety checklists

AAPM's role ... science and innovation

- Concern that requirement for residency will discourage new researchers
- AAPM does not directly support much research
 - Does offer \$50K in seed funding through Science Council (Dan Low chairs)
- Focused Research Meetings (FOREMs)
- Grantsmanship workshops

AAPM's role ...

leadership/management skills

- Professional Council and Education Council are developing a plan to provide professional training in:
- Management
 - Project management
 - Financial models and budgets
 - Employee management
- Leadership
 - Fostering organizational growth and change

Proper utilization of qualified physicists

- Issues
 - What levers do we have to influence the use of “QMPs”?
 - What tasks should be performed by QMPs? What degree of supervision is needed for other tasks?

Levers

- Regulation/Legislation
 - Licensure
 - An expensive effort that is ramping down
 - Only MA currently in play

Levers (2)

- Regulation/Legislation
 - Regulation
 - CRCPD suggested regulations (Doug Pfeifer)
 - Annual training of state inspectors at CRCPD meetings
 - CRCPD database of board certified physicists

Levers (3)

- Practice accreditation (MQSA, MIPPA ...)
 - AAPM is working with accrediting bodies to require involvement of QMPs in imaging – varied success
 - CMS approved accrediting bodies: ACR, Intersocietal Accreditation Commission (IAC), Joint Commission

Imaging accreditation

- AAPM has liaisons to
 - ACR
 - Beth Schueler, Nick Detorie
 - IAC: ICACTL (CT), ICANL (NM, PET)
 - Stephen Balter, Stephanie Franz, Bob Pizzutiello, Chun Ruan
 - Joint Commission
 - Ralph Lieto

Levers (4)

- Professional staffing guidelines
 - “Blue Book” revision (ASTRO)
 - Dan Pavord, Chris Serago, Mike Mills
 - ASTRO white papers on safety (Fraass)
 - IMRT (Moran), SRS/SBRT (Solberg), IGRT (Jaffray) all stress staffing needs

Practice Standards and Accreditation

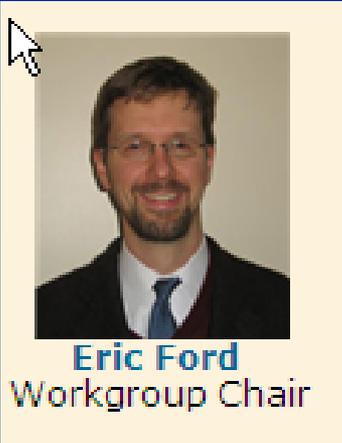
- Develop **Medical Physics Practice Guidelines** that can be referenced by accrediting bodies (imaging and therapy)
- Under Professional Council (Per Halvorsen); Maria Chan chairs the effort
- First two:
 - CT Protocol Management and Review
 - Evaluation and QA of X-ray based image guided radiotherapy systems

Emphasis on Safety

- Shift in “QA” from “product testing” (TG-40, TG-142) to “process control”
 - Standardized procedures
 - Checklists
 - Time-outs
 - Process improvement (internal event reporting)
 - Failure mode analysis

Emphasis on Safety – National Event Reporting

- Consensus that we do this badly and need this badly
- Nascent efforts jointly with ASTRO and others
- Working Group on the Prevention of Errors has completed a report on a taxonomy to be used for event reporting



Duncombe, Peter B.
10/5/2005-12/31/2011 **Workgroup Chair**



Followill, David S.
11/23/2005-12/31/2011 Member -



Fong de los Santos, Luis E
8/12/2008-12/31/2011 Member



Ford, Eric C
1/1/2011-12/31/2013 **Workgroup Chair**
8/10/2009-12/31/2012 Member



Halvorsen, Per H.
11/23/2005-12/31/2011 Member -



Huq, M. Saiful
8/1/2003-12/31/2011 Chair - Chair, Task Group No. 100 (ex officio)



Johnson, Jennifer Lynn
1/1/2011-12/31/2013 Member



Pawlicki, Todd
11/23/2005-12/31/2011 Member -



Schell, Michael C.
1/16/2007-12/31/2012 Member



Sutlief, Steven G.
8/12/2008-12/31/2011 Member



Thomadsen, Bruce R.
11/23/2005-12/31/2011 Member -



Weinhaus, Martin S
11/23/2005-12/31/2011 Member -

Event reporting: Wish list

- Independent of government and vendors
- Capture all events, not just machine- or product-related, including near misses
- Actively triaged with communication to reporters to get complete information
- Confidential, anonymous, **legally protected**
- Mechanism(s) for distributing results

Recurring themes

- Standards
 - Certified physicists in accredited practices
 - Standard procedures, checklists

Recurring themes

- Collaboration, cooperation
 - Working more with ASTRO, RSNA, ACR, CRCPD
 - White papers, staffing recommendations, event reporting....
 - African proverb: “If you want to go fast, go alone. If you want to go far, go with others.”

Recurring themes

- Adaptation, evolution
 - Training models (hub/spoke residencies; DMP)
 - Replace silos with networks
 - Event reporting
 - Peer – peer sharing

The biggest rock ...

- We have an unsustainable health care system
- Financial pressure is going to drive innovation and efficiency
 - Do what matters
 - Stop doing what doesn't

Bringing it back home

- How can we respond individually and locally to these developing emphases?
 - Patient safety
 - Practice standards
 - Efficient operations

Safe, Effective, Efficient

Internally ...

- Standardize and document procedures
- Employ checklists and “Time Outs”
- Record and respond to errors and near misses
- Measure your effectiveness, learn what matters
- Commit to the practice becoming accredited

Externally ...

- Get together and share best practices
- Get together and share errors and near misses

AAPM is how we help each other ...
locally and nationally

“Be the change ...”

