AAPM 2012 and Beyond: Major Initiatives

Gary A. Ezzell, Ph.D.
Mayo Clinic Arizona
AAPM President
ezzell.gary@mayo.edu
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 Pffeifer)
  - 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
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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 …”