AAPM 2012 and Beyond: Major Initiatives

Gary A. Ezzell, Ph.D.
Mayo Clinic Arizona
AAPM President
ezzell.gary@mayo.edu

Who he?

- MS 1977 Georgia Tech
- Atlanta, ’77 - ’79
- Cleveland, ’79 - ’84
- Detroit, ’84 - ’99
  - PhD 1994 Wayne State
- Scottsdale/Phoenix, ’99 - …

AAPM's "Big Rocks"

Recurring themes

- Standards, standardization, standard operating procedures
- Collaboration, cooperation
- Adaptation, evolution

- Issues being addressed
- Issues not yet being addressed

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
- Emphasis on safety
- Operation of AAPM Board of Directors

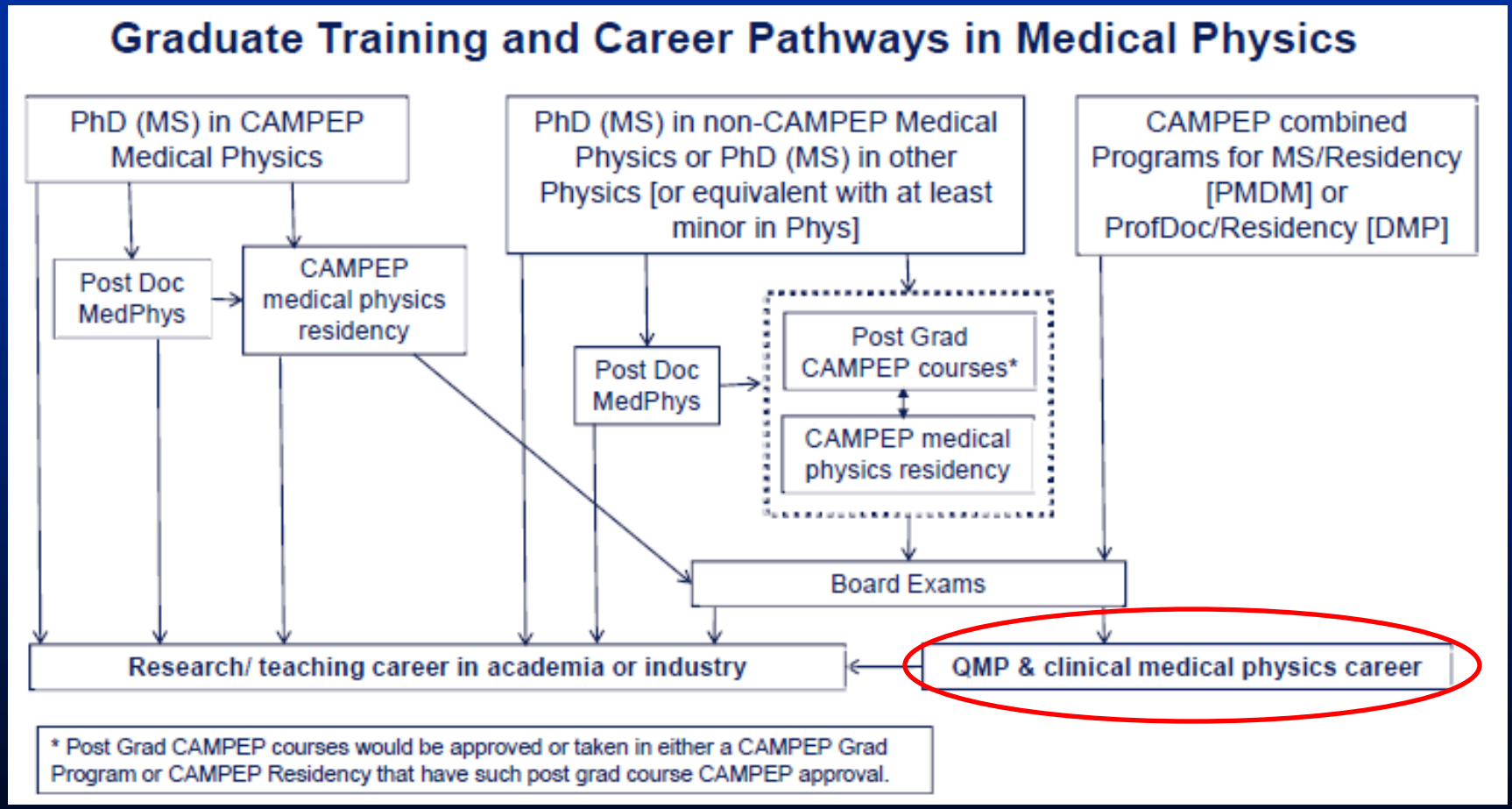
Adequate supply of qualified physicists

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

Evolution of clinical practice qualifications

- 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.)

Qualification for clinical practice



Where do we stand on residencies?

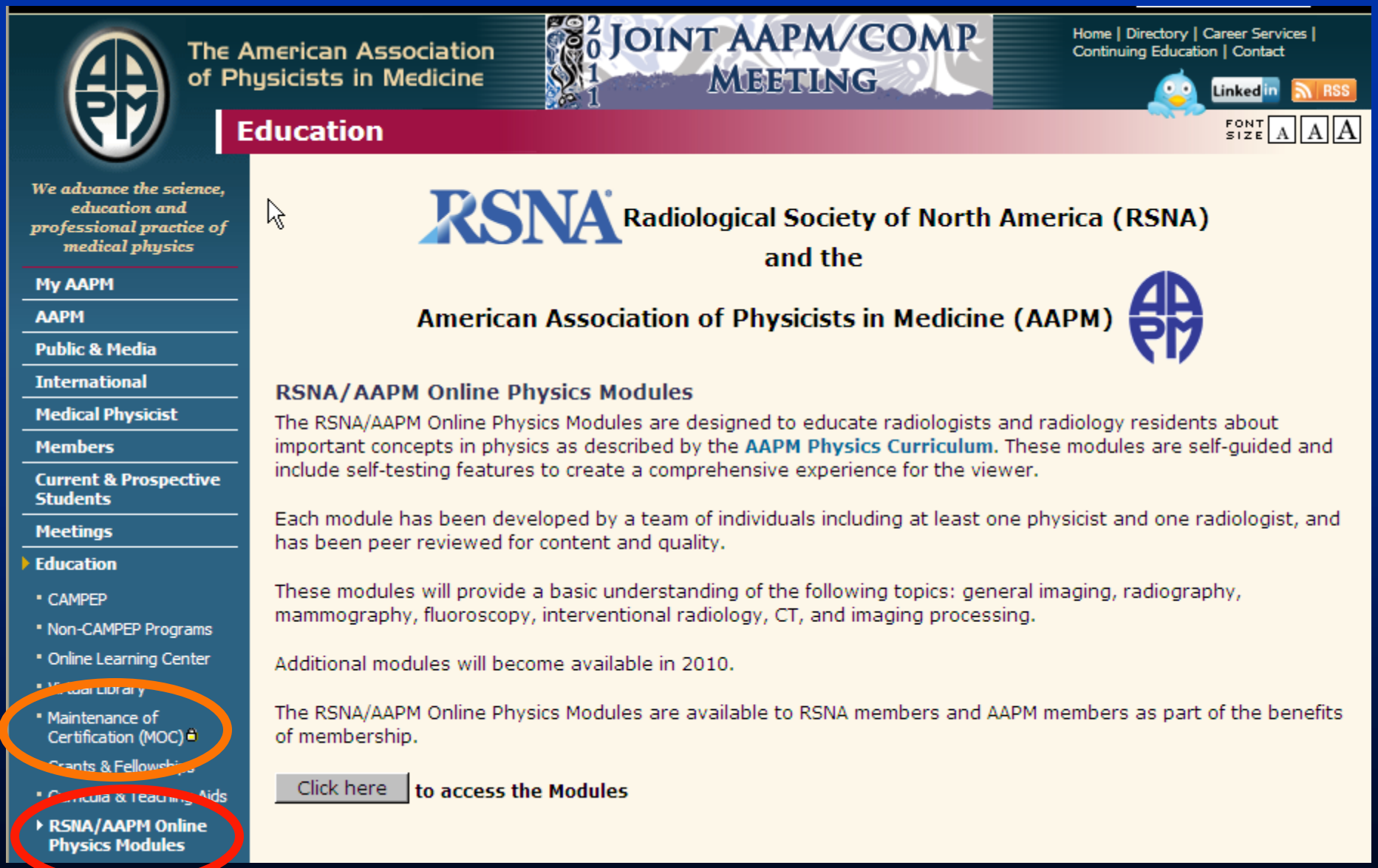
- Summer 2011:
  - Bruce Gerbi – 59 in therapy, 7 in imaging; 71 slots in therapy, 8-9 in imaging
  - Ed Jackson -- ~240 graduates (170 MS, 70 PhD), but 2:1 preference for PhD in residencies
- Issues
  - Lack of residencies, especially in imaging and for MS graduates

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 and SCARD to promote 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
- For medical residents: online physics modules
  - First group completed with RSNA
  - Radiation Oncology residents want them also


The American Association of Physicists in Medicine
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Maintenance of Certification (MOC)
RSNA/AAPM Online Physics Modules
RSNA Radiological Society of North America (RSNA)
and the
American Association of Physicists in Medicine (AAPM)
RSNA/AAPM Online Physics Modules
The RSNA/AAPM Online Physics Modules are designed to educate radiologists and radiology residents about important concepts in physics as described by the AAPM Physics Curriculum. These modules are self-guided and include self-testing features to create a comprehensive experience for the viewer.
Each module has been developed by a team of individuals including at least one physicist and one radiologist, and has been peer reviewed for content and quality.
These modules will provide a basic understanding of the following topics: general imaging, radiography, mammography, fluoroscopy, interventional radiology, CT, and imaging processing.
Additional modules will become available in 2010.
The RSNA/AAPM Online Physics Modules are available to RSNA members and AAPM members as part of the benefits of membership.
Click here
to access the Modules

AAPM's role … science and innovation

- Concern that requirement for residency will discourage new researchers
- Concern that "Science" is undervalued in current strategic plan
- John Hazle (Pres-Elect) and Dan Low (Science Council chair) led a retreat to focus on keeping support for science and research strong

AAPM's role … leadership/management skills

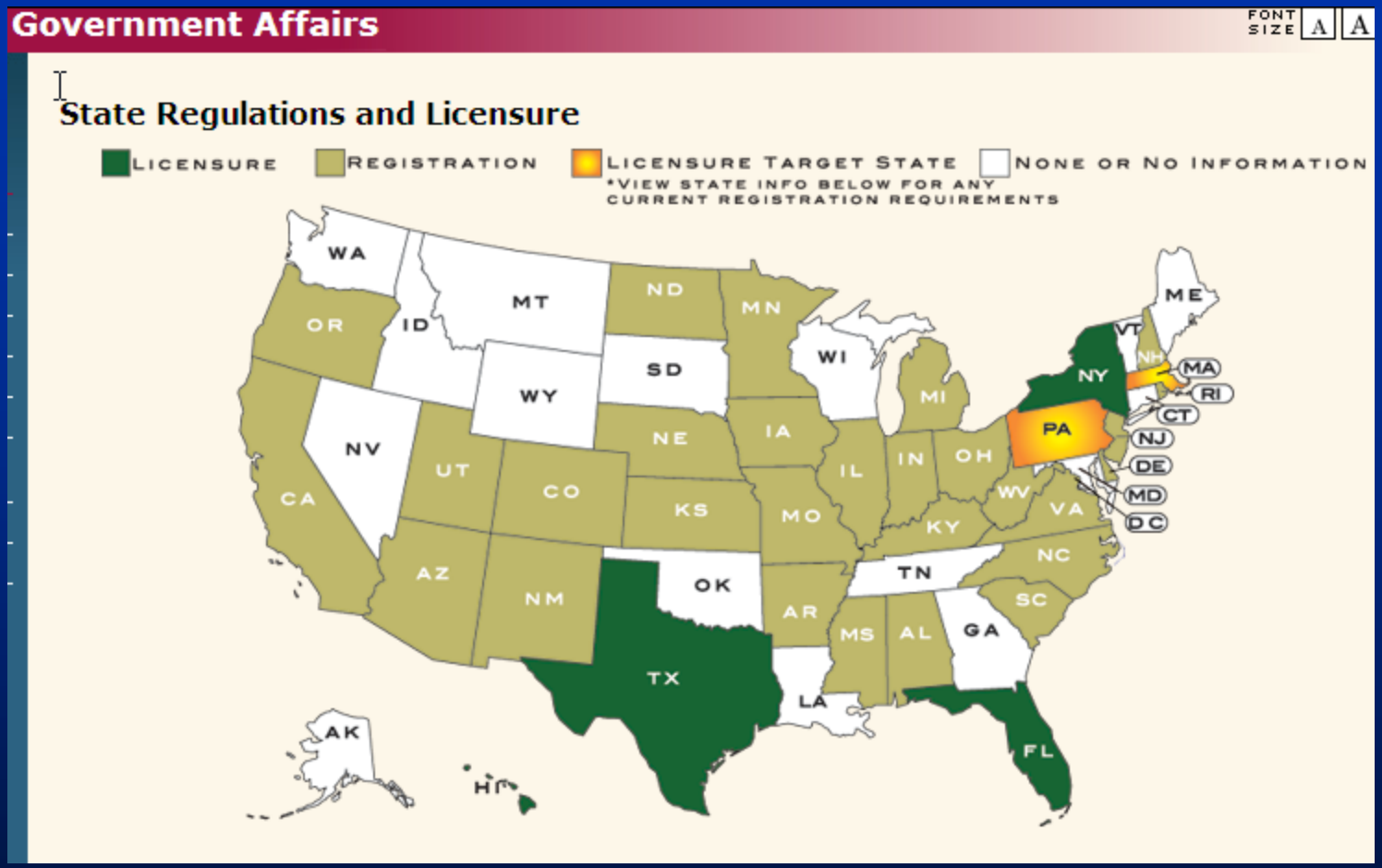
- Professional Council and Education Council to provide professional training in:
- Management
  - Project management
  - Financial models and budgets
  - Employee management
- Leadership
  - Fostering organizational growth and change

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
    - Active lobbying in MA, PA
    - Grassroots effort in IN, KY, OH
    - In 2011, Board committed $200K/yr for 3 yrs
  - Regulation
    - CRCPD suggested regulations
    - CRCPD database of board certified physicists



- Licensure bill was introduced in PA,
- under review in MA

Pennsylvania

Bill was introduced, but received unfavorable Sunrise Evaluation review by Department of State staff – estimated $500/yr cost per physicist

Massachusetts

Moving along in a generally positive direction.

Levers (2)

- Regulation/Legislation
  - CARE bill
    - Re-introduced in 2011 by Rep. Ed Whitfield (R-KY) and John Barrow (D-GA); valid through 2012
    - ***Consistency, Accuracy, Responsibility, and Excellence in Medical Imaging and Radiation Therapy Act of 2011***
  - CA CT regulation

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

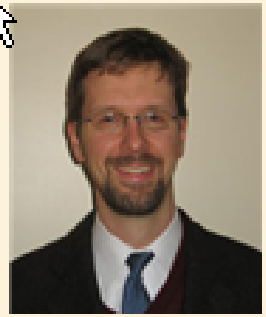
- Develop Medical Physics Practice Guidelines that can be referenced by accrediting bodies (imaging and therapy)
- More formal than task group recommendations
- Process approved by AAPM Board in 2011; First likely out in summer, 2012

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
- Ongoing efforts jointly with ASTRO, NIH, ACR, CRCPC, AAPM, ASRT, etc.
- Working Group on the Prevention of Errors has completed a report on a taxonomy to be used for event reporting



Eric Ford
Workgroup Chair

no photo available **Dunscombe, Peter B.** COI 10/5/2005-12/31/2011 **Workgroup Chair**	 **Followill, David S.** COI 11/23/2005-12/31/2011 Member -
 **Fong de los Santos, Luis E** COI 8/12/2008-12/31/2011 Member	 **Ford, Eric C** COI 1/1/2011-12/31/2013 **Workgroup Chair** 8/10/2009-12/31/2012 Member
 **Halvorsen, Per H.** COI 11/23/2005-12/31/2011 Member -	no photo available **Huq, M. Saiful** COI 8/1/2003-12/31/2011 Chair - *Chair, Task Group No. 100 (ex officio)*
no photo available **Johnson, Jennifer Lynn** COI 1/1/2011-12/31/2013 Member	 **Pawlicki, Todd** COI 11/23/2005-12/31/2011 Member -
no photo available **Schell, Michael C.** COI 1/16/2007-12/31/2012 Member	 **Sutlief, Steven G.** COI 8/12/2008-12/31/2011 Member
 **Thomadsen, Bruce R.** COI 11/23/2005-12/31/2011 Member -	 **Weinhous, Martin S** COI 11/23/2005-12/31/2011 Member -

Event reporting: Key aspects

- 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
- Widely adopted

Event reporting: Key aspects

- Appropriate data structures
  - Scoring system for severity
  - Classification scheme for errors, causes, contributing factors
- Mechanism for investigation where warranted
  - Independent of regulators, vendors
  - Able to communicate with vendors
- 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 effiiciency
  - Do what matters
  - Employ expert systems
- Caution: avoid prescriptive regulation that will inhibit adaptation

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 …"