American Board of Radiology - Current Issues and Considerations for Radiological Physicists

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ACMP Meeting 2011

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Charleston, SC

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Topics

- 2012/2014 Requirements
- Maintenance of Certification
  - Cognitive Exam for MOC (Physicists)
2012/2014 Requirements

**Current Emphasis**

- **Minimum Education**
  - 3 advanced undergraduate or graduate physics courses
  - 3 graduate medical physics courses
  - 2 undergraduate or graduate biology courses

**Clinical Experience in Medical Physics**

- Requirement has been dropped for Part 1
- Three years of clinical experience is still required for Part 2
  - Or completion of a two year CAMPEP residency

**2012 Requirements**

- As of 2012 either a CAMPEP degree or a CAMPEP residency is required to sit for the ABR Exam
  - Last year to apply under current system was 2010
  - Beginning with the 2011 cycle either
    - A CAMPEP Accredited Degree
    - OR A CAMPEP Accredited Residency
2014 Requirements

- As of 2014 a CAMPEP residency is required to sit for the ABR Exam

Why the Change?

Mission

The mission of The American Board of Radiology is to serve patients, the public, and the medical profession by certifying that its diplomates have acquired, demonstrated, and maintained a requisite standard of knowledge, skill and understanding essential to the practice of diagnostic radiology, radiation oncology and radiologic physics.

Six Competencies

1. Professional & Medical Knowledge
2. Patient Care
3. Interpersonal & Communication Skills
4. Professionalism
5. Practice-based Learning & Improvement
6. Systems-based Practice
Tools – Initial Certification

- Standards for physics education
- Standards for medical physics education
- Standards for clinical training
- Standards for experience
- Examinations
  - Parts 1, 2 and Oral

As much as possible the ABR uses standards developed by the AAPM & CAMPEP

Early 21st Century

- Poorly Educated (Basic Knowledge)
- Poorly Educated (Clinical Education)
- Narrow Clinical Base

Ten Years to CAMPEP

- In 2002 ABR announced that in 10 years they would require CAMPEP training
- A number of meetings with stakeholders
  - AAPM, ABR, CAMPEP, (Many Others)

New Model for Professional Education

New Model for Clinical Medical Physics Training

- Education in Physics (Under Graduate Degree) (4 yrs)
- Degree in Medical Physics (CAMPEP Graduate Degree)
- CAMPEP Supplementary Academic Training in MP
- Clinical Training (CAMPEP Residency) (2 yrs)
- Degree in Physics (Graduate Degree) (>=>2 yrs)
By 2020

- Poorly Educated (Basic Knowledge)
- Poorly Educated (Clinical Education)
- Narrow Clinical Base

CAMPEP Academic Education
Residency

Effects of the Initiatives on Application Numbers

Recent Application Numbers

Part 1 applications have approximately doubled since 2007 and should peak this year.

Record number of oral exams this year ans orals should peak in 2013,
Oral Exam Pass Rates (%)

New Certificates per Year
- Above 200 per year
- This is widely viewed as more than the profession can sustain

Serious Issues Remain
- Number of Residencies
- Total Number of Medical Physicists Needed
- Role of the Professional Doctorate
- *How to Accommodate Physicists Trained in Other Countries*
MOC – No significant changes

The Boards want the public and governmental authorities to accept participation in MOC as being reasonable evidence that the practitioner is maintaining his or her professional skills

General Structure

Major policies and structures

- ABMS
- ABR
- ABIM
- ETC

Significant variation

- DX
- RP
- RO

Minor variation
MOC Is Dynamic

- The MOC Requirements Change
  - Refined by ABMS and Individual Boards
- New Elements Come into Effect in the Later Years of Each Cycle
Lifelong Learning & Self Assessment

- 25 hours of MPCEC or Category I
  - 80% for RO in RO

- SAMs
  - RO 1 per year
  - MP 2 per year

The ABMS is adjusting the SAM Requirements so this will change soon.

The net result will probably that some fraction LLL will have to have an evaluation component.

Self Assessment Modules

- 20 [2 per year] physicists
- 10 [1 per year] radiation oncologists
- Some SAMs are on-line
- Most professional organizations offer SAMs at their meetings
- There is a list of approved SAMs on the ABR website

Lifelong Learning SDEP’s for Physicists

- 15 hours per year can come from SDEP’s
  - Self Directed Educational Project

Radiologic Physics SAMs

<table>
<thead>
<tr>
<th>Category</th>
<th>Title of SAM</th>
<th>Society</th>
<th>Venue</th>
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<tbody>
<tr>
<td>Physics in Breast Imaging</td>
<td>Radiation Dosimetry and Image Quality (Check for Availability)</td>
<td>DREMA</td>
<td>On line</td>
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<tr>
<td>Physics in Nuclear Medicine and PET</td>
<td>PET Imaging Quality Control/Compliance</td>
<td>RSNA</td>
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<td>Physics in Radiation Protection and Dosimetry in PET and PET/CT</td>
<td>Radiation Protection and Dosimetry in PET and PET/CT</td>
<td>RSNA</td>
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<tr>
<td>Physics in Radiation Therapy</td>
<td>Part of Volume Effect in PET Tumor Imaging</td>
<td>RSNA</td>
<td>On line</td>
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<td>Physics in Radiation Therapy</td>
<td>Bone Sarcoma at PET and PET/CT</td>
<td>RSNA</td>
<td>On line</td>
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<td>Physics in Radiation Therapy</td>
<td>Basic Imaging Physics and Image Formation</td>
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<td>Physics in Radiation Therapy</td>
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MOC – Lifelong Process

- MOC is intended to be a continuous process thus there are limits to the amount of Life-long learning and SAM credits that are acceptable each year
  - Life-long Learning 50
  - SAMS 4 MP & 2 RO

Temporary Catch-up Provision

This provision to the MOC Participation policy allows diplomats with a certificate expiring from 2009-2015 to complete triple the normal yearly MOC requirements during a calendar year starting in year seven (7) of the MOC cycle and extending into the three year grace period, if necessary.

Temporary Catch-up Provision Details of provision:
Is available to all Diagnostic Radiology, Radiation Oncology and Radiologic Physics diplomates with a certificate expiring from 2009 - 2015.
Reporting triple the normal requirements is not available until year 7 of MOC cycle and extends through the end of the 3 year grace period, if needed.
This provision to the MOC Participation Policy will expire on December 31, 2018

Getting Behind

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There is a point where it is impossible not to have a lapse in your certification. Enters “Non-recoverable” status
Maintenance of Certification

Cognitive Exam

- One per Cycle
- Take in years
  - 8, 9, 10
  - (This may change)
- Pilot was given in 2009
- First Exam 2010

Cognitive Exam

- Required by ABMS
  - So all ABMS boards have an exam in all disciplines
- Some research shows that an exam improves performance
- However – some groups like the Royal College in Canada do not require one
Study Guides Are Provided
- 30% basic
- 70% new material
- Clinical Protocols
- Standards
- Relevant Documents

Issues
- Most people will maintain their competency
- Exam needs to be sensitive and specific
- Exam needs to be acceptable to legislators, and regulators
- Exam needs to be acceptable to the general public

Exam Validation
- Criteria Referenced
- Validated

Status
- Pilot in 2009
  - Pass Rate ~75%
- Exams available
  - Years 8-10
  - Exam was given in Fall 2010
  - Very Small Numbers
Practice Quality Improvement

- All diplomates must have training in PQI
- All must be continuously involved in the PQI process

PQI - Rationale

- Significant issues of quality and safety in medicine
  - Institute of Medicine “To Err Is Human”
- Industrial Experience from Manufacturing
  - Process Control

First Steps

- Training is the First Step
- We need to learn to do effective projects that improve health and safety
- We need to incorporate PQI into the fabric of the culture of our work
- It took Toyota more than 20 years to transform it’s manufacturing culture

ABR PQI Process

The first year is allocated to training in PQI. The best way to do this is to do a SDEP.
Types of Projects

Individual

Society Sponsored

PQI Developments

- Working on a number of fronts to make it “easier”
- Group Practice projects
  - Physics and physician components
- Institution projects – whole “health system” for example. Would get “deemed status” from ABMS
- Templates – make personnel projects easier
Fee’s and Late Fees

- ABR has had a significant expense associated with MOC
  - MOC Staff
- Increased fees for ABMS

Late (or No) Payment Has Been An Issue

- Not nearly so much for physics as for the other disciplines
- However since on January 1, 2009 a late fee of $100 applies for those who have not paid the previous years fees.

Fees

- For original enrolled individuals the fee was constant for all 10 years of the cycle.
- This will start to increase on an annual basis beginning with the group having certificates expiring in 2018 and will apply to other groups when they finish their first cycle.

The ABR Takes the Following Steps to Keep Enrolled Individuals Informed

1) Discussions held at ABR Booth
2) Pamphlets distributed at society meetings
3) Trustee presentations at various society meetings
4) Articles, announcements in paper and electronic newsletters of various societies
5) The Beam
6) Email
7) Snail mail/postcards
8) Website content and FAQs
9) Direct email responses to individual email questions
10) One-on-one phone conversations with diplomates in office
11) Surveys
The full integration of the MOC process so its components are fully integrated into the training and practice of diplomates will be lengthy.

However this process will strengthen the professions and increase public trust.