The Importance of Accreditation, Current Activities, and Accredited Programs
(The residency program model)

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Topics for Discussion

• Importance of medical physics residency training
• Importance of accrediting medical physics residency training programs
• Strategic planning for medical physics residency training programs

What is Residency Training?

Residency training is a period of advanced training in a medical specialty.

Why is Medical Physics Residency Training Important?

Benefits to the medical physicist
– Guarantees breadth of training
– Should provide greater self-confidence
– Should allow board certification to be achieved sooner
– Should improves ones marketability (short-term)

Benefits to our profession
– Raises level of minimal competency of those coming into the field
– Results in increased proficiency and efficiency of medical physics services, which benefit the patient and the provider’s group

Estimate of Training for Various Career Paths

<table>
<thead>
<tr>
<th>Program</th>
<th>Clinical</th>
<th>Didactic</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD medical physics + residency</td>
<td>(2-3 y)</td>
<td>(1 y)</td>
<td>(2-4 y)</td>
</tr>
<tr>
<td>PhD physics + residency</td>
<td>(1½ y)</td>
<td>(½ y)</td>
<td>(0 y)</td>
</tr>
<tr>
<td>PhD medical physics</td>
<td>(0-1 y)</td>
<td>(1 y)</td>
<td>(2-4 y)</td>
</tr>
<tr>
<td>PhD physics + postdoctoral</td>
<td>(¼ y)</td>
<td>(3½ y)</td>
<td>(1 y)</td>
</tr>
</tbody>
</table>

Assumes CAMPEP-accredited programs and 2-y residency program
Why is Medical Physics Residency Training Important?

Benefits to the resident’s department
– Contributes to the medical physics workforce
– Increases visibility of medical physics in hospital

What is Accreditation?

Accreditation is the act of recognizing an educational program as maintaining standards that qualify the graduates for professional practice.

Importance of Accrediting Medical Physics Residency Training Programs

• Peer review confirms program meets established standards
• Elevates likelihood of program acceptance by internal administration
• Should fulfill institutional requirement for periodic external review
• Qualifies program for HCFA funding
• Qualifies graduates sooner for certifying board examination

Estimate of U.S. Post-graduate Training Programs in Medical Physics

• Accredited residency programs (3)
  – Therapy (3), Imaging (0)
• Unaccredited residency programs (12)
  – Therapy (8), Imaging (4)
• Unaccredited postdoctoral programs (10)
  – Therapy (6), Imaging (4)

Sources: AAPM and CAMPEP

Strategic Planning for Future of Medical Physics Residency Training

• Strategic accomplishments to date
• Strengths-Weaknesses-Opportunities-Threats
  SWOT Analysis
• Future Aims

Strategic Accomplishments To Date

1. AAPM Report Number 36, “Essentials and Guidelines for Hospital-Based Medical Physics Residency Training Programs” (1990)
4. Accreditation of four radiation oncology residency education programs with three under review (1997-present)
Strategic Accomplishments
To Date (continued)

Seed funding provided for programs via eight fellowships (each funds 50% of resident for 2 years)
- ASTRO: Radiation Oncology Physics Resident Fellowships (2)
- Varian Oncology Systems: Radiation Oncology Physics Resident Fellowships (2)
- Elekta Oncology Systems: Radiation Oncology Physics Resident Fellowship
- RSNA Research and Education Fund: Diagnostic Imaging Physics Fellowships (2)
- AAPM: Diagnostic Imaging Physics Fellowship

Twenty five fellowships issued (1992-2001)

- Resident direct costs are eligible (salary & benefits)
- Rate depends on costs and Medicare % of total revenues
- Reimbursement = funds for 0.25 FTE

ABR and ABMP recognizes medical physics residency training by reducing professional experience required for sitting for board certification exam

Efforts made to publicize medical physics residency training to radiology community
- AAPM President’s Message at RSNA: “Report from the Chairman of the Board,” AAPM Newsletter 26(2): 6,8 (2001)
- Upcoming presentation to the ACR sponsored Intersociety Summer Conference

Strategic Planning- SWOT Analysis
Strengths
- Guidelines for establishing and accrediting programs are in place.
- Initial core of medical physics residency programs exist.
- Radiology professional societies are aware of our goals and are supportive.

Weaknesses
- Programs in diagnostic imaging physics have lagged behind progress in radiation oncology physics.
- Current conditions insufficient to support proliferation of programs:
  - graduates of medical physics programs go directly into positions
  - competition for hospital funds could restrain program development

Opportunities
- Increasing complexity and breadth of diagnostic imaging and radiation therapy equipment and procedures requiring increased dependability on medical physicist
- Increasing focus on performance improvement in healthcare
- Increasing presence of regulations for qualified medical physicists
Strategic Planning - SWOT Analysis

Threats
- Physicians viewing increased credentials of medical physicists as being a cost to their practice
- Difficulty in achieving state licensure opening potential for inadequately trained staff to perform medical physics duties
- Competitive certification boards delaying the requirement of residency training for sitting for board exams

Strategic Planning - Future Aims

• Continue to actively pursue state licensure
  – maintain licensure in Florida (AAPM Florida Chapter)
  – achieve licensure in New York (NY Medical Physicists)
  – achieve inclusion into CARE bill (ACMP/AAPM)
• Make residency training a requirement for sitting for board certification examination
  – achieve ABR-ABMP board unification (AAPM/ACMP)
  – specify residency requirement to be effective in 2010 (ABR/ABMP)

Strategic Planning - Future Aims

• Focus on incentives for graduates of accredited medical physics programs to enroll in residency programs
  – develop 1.0 y programs at academic institutions
  – develop incentives for this route (?)
  – provide statistics in annual professional survey (AAPM)

Strategic Planning - Future Aims

• Develop and execute strategy to increase number of residency training programs (?)
• Develop and execute strategy to increase number of accredited residency programs in diagnostic imaging physics (?)
• Increase effort to educate physicians on benefit of medical physics residency education programs (?)
• Develop committee dedicated to medical physics residency training (ACMP or AAPM)

Proposed Committee’s Mission/Vision Statement

Mission
To ensure that all medical physicists receive adequate training before commencing clinical practice

Vision
That all medical physicists will complete a residency training program in their specialty before commencing clinical practice

Conclusions

• Medical physics residency training programs are important to medical physics and healthcare.
• Progress to date in establishing medical physics residency education programs has been impressive and positive.
• Completing the vision that all future medical physicists will complete a residency training program will require defined leadership and focused strategies.