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Essentials and Guidelines for Clinical Medical Physics Residency Training Programs

Report from the Work Group on Periodic Review of Medical Physics Residency Training

October 2013

Recommended Training Areas

- Ethics & Professionalism
  - TG-159: AAPM Code of Ethics
- Professional Liability
- Professional Activities & Societies
  - AAPM, RSNA, ABR, ACR, ASTRO, CCPM, COMP, SNM, SIIM, SPIE
- Communication, Teamwork, & Leadership
- Administration: Personnel Mgmt, Budgeting, Billing
- Accreditation & Regulatory Agencies
- Continuous Quality Improvement (CQI)
- US FDA Safe Medical Devices Act of 1990 (SMDA)

Core Competencies

Specified by American Board of Medical Specialties (ABMS) & ACGME

1) Patient Care & Procedural Skills
   - Radiological anatomy & physiology
   - Major factors affecting patient care
   - Technical & dosimetric information
   - Improving/maintaining image quality
2) Medical Physics Knowledge
   - QA of imaging and therapy equipment
   - Measurement & calculation of exposure and dose
   - Clinical physics investigation, analysis, & problem solving
3) Practice-based Learning & Improvement
   - Evaluate patient care practices
   - Radiation biology and epidemiology
   - Investigating equipment performance
4) Interpersonal & Communication Skills
   - Communicating with clinicians, technologists, and others
   - Effective teaching of medical physics and radiation safety
   - Producing accurate, concise reports
5) Professionalism
   - Commitment to clinical responsibility
   - Participating in professional societies
   - Recognizing and prioritizing patient needs
   - Respecting patient privacy
6) Systems-based Practice
   - Competence in IT issues
   - Understand policy development
   - Awareness of larger context and system of healthcare provision

CHAPTER 4

GUIDELINES FOR RADIATION ONCOLOGY PHYSICS RESIDENCY TRAINING PROGRAMS