Professional Doctorate in Medical Physics (PDMP)

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PDMP in Medical Physics

- PDMP – What Is It?
- Impact on Medical Physics
- PDMP Program Plans at Vanderbilt
- PDMP Curriculum at Vanderbilt
- New Proposed Clinical Training Model and Financial Impact
PDMP – What Is It?

- Professional Degree (PDMP) not a Research Degree (PhD)
- Combines Didactic and Clinical Training
- Four – Five Year Program
- More than a MS Degree and a Clinical Physics Residency
- Students Pay Tuition for Duration of the Program (perhaps stipend)
- May Limit the Number of Graduates per Year
- Meets Eligibility Requirements for ABR Physics Exam (Parts I and II)
Impact on Medical Physics

► White Paper Presented to AAPM Board in July, 2008
  Impact on Medical Physics Profession
  Impact on Current Education Programs
  Impact on Medical Physics Research
  Impact on PDMP Graduates
  Impact on MS Graduates
PDMP Program Plans at Vanderbilt

- Awaiting Board of Trust Approval (Agenda Item for February Meeting)
  - Medical Physics Faculty and Chairs of Radiology & Radiation Oncology
  - Dean of the School of Medicine
  - School of Medicine Executive Committee
  - Vanderbilt Faculty Senate
- Four Year Program
- Therapy and Diagnostic Tracks
- 50 Didactic hrs + 6 Research Problem hrs + 36 Clinical Training hrs
- Clinical Training will be 24 Months
- Recruiting Students for Fall Semester, 2009
- Three Current MS Students will Enroll in PDMP Program in May, 2009
- Alternate Pathway for Former Vanderbilt MS Students
Vanderbilt PDMP Curriculum
Therapy Physics Tract

► Anatomy & Physiology   (8 hrs)
► Introduction to the Physics of Medical Imaging (3hrs)
► Health Physics I (3hrs)
► Radiation Detectors (3hrs)
► Interactions of Radiation with Matter (3hrs)
► Elective (3 hrs)  Statistics/Math Methods
► Brachytherapy Physics (3hrs)
► Brachytherapy Physics Practicum (2hrs)   Clinical (1 month)
► Radiotherapy Physics I (3hrs)
► Radiation Biophysics (2hrs)
► Radiation Oncology Seminar (1hr)
► Diagnostic Physics (3hrs)
► Diagnostic Physics Laboratory (2hrs)
Curriculum (continued)

- Radiotherapy Physics II (2hrs)
- Radiotherapy Physics Laboratory I (2hrs)
- Health Physics II (3hrs)
- Radiotherapy Physics Laboratory II (2hrs)
- Radiotherapy Physics Practicum (4hrs) Clinical (2 months)
- Task Group Reports Seminar (1hr)
- Elective (3hrs) Tumor Imaging
- Research Problem (6hrs)
- Clinical Rotations (30 hrs) Clinical (21 months)
Financial Models

MS Degree + Residency

- Research Enterprise Funds Student Tuition and Stipend (limited)
- Clinical Enterprise Funds Student Tuition and Stipend (limited)
- Student pays Tuition & Expenses (common)
- Residency Institution Pays Approximately 50% Salary x 2 Years (common)

PDMP

- Student Pays Tuition & Expenses for Year 1 & 2
- Student pays Shared Expenses for Year 3 & 4
- Residency Institution Pays Tuition and Shared Expenses for Year 3 & 4
New Proposed Clinical Training Model

► Vanderbilt Enters Agreement with Institution(s) Offering Physics Residency
► Students Receive Didactic instruction in Year 1 and Year 2
   (also 6 hrs of Clinical Training - 3 months equivalent)
► Students Attend Off-campus Institution for Year 3 and Year 4
   for Clinical Training - 21 months equivalent
   and Research Problem - 3 months equivalent
► Off-campus Institution Contract with Vanderbilt Includes Tuition, Insurance
► Student Receives PDMP Degree at the Completion of All Requirements
Financial Implications

- Burden of Education/Training is Shared Between the Student and the Educational /Residency Institutions
- Students Pay Tuition During Year 1 and Year 2
- Residency Institution Pays Tuition during Year 3 and Year 4
- Residency Institution’s Financial Implication May be a Factor of $\frac{1}{2}$ Cost of Present Residency Stipends
- Product is Well-Trained in Medical Physics for the Job Market
- Since Overall Costs of Training is Shared, Perhaps This is One Alternative to Reaching the Goals Associated with 2014 Initiative