

Self-Funding a Residency

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Self-Funding a Residency

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Background

- ◆ In the past Medical Physics training occurred informally, and it has been mostly on job training and therefore very much dependent on the drive of the trainee and the availability of ad-hoc mentoring.
- ◆ Availability of a large spectrum of technologies was not everywhere present and voids were not monitored and alternatives were not always available.
- ◆ As a result the quality of medical physics training was variable and was reflected by the lower board certification passing rates.
- ◆ With the advent of computer driven technologies such as IMRT, formalized training as a residency became a necessity.

Background

- ♦ Residency is a dedicated training time, which occurs after post graduate studies, in a medical physics speciality.
- ♦ Clear goals and competencies have to be achieved towards graduation in order to ensure the successful ABR certification and a safe, accurate and effective patient care.
- ♦ Currently residency programs have to be CAMPEP accredited and therefore undergo surveillance and periodic re-evaluation in order not only to achieve but also to maintain CAMPEP accreditation.

Selling the idea(The Value and the Need)

To the Medical Physicist:

- Ensure the depth and breadth of training.
- Ensure credibility, Builds Self-confidence to allow for rapid integration with the medical team.
- Facilitates Board Certification and improves visibility on the job market.

Selling the idea(The Value and the Need)

To the Medical Physics Profession:

- Demonstrates commitment to the medical aspects of the profession following a similar career path development with the physicians.
- Increases the level of professionalism of Medical Physics Services through a higher level of competency of those entering the field.
- Increases the level of medical physics services which benefit the patient and the provider.

Selling the idea(The Value and the Need)

To the Employer...Healthcare.

- The continued development and increase in complexity and breadth of diagnostic and therapy equipment and procedures require highly dependable medical physicists.
- There is an increased focus on regulations for qualified medical physicists.
- There is an overall arching goal to improve performance in medicine with medical physicists playing a crucial role in both diagnostic and therapy.
- Greater awareness of safety and safety culture in hospitals and the medical profession in the past 15 years (PA Act 13)

Selling the idea(The value and the need)

To the Employer..Healthcare

- Residents are talented, driven and committed individuals with strong Medical Physics background who can contribute to the department medical physics workforce in a structured and supervised training environment, resulting in immediate value to the employer (short term).
- Promotes an atmosphere of questioning and debate within the department which isa precondition for progress (short and long term).
- Increases interactions with medical professional trainees and subsequently increases Medical Physics visibility within the hospital (long term).

Selling the idea(The value and the need)

To the Employer...Healthcare

- Generates a broadly trained Medical Physics workforce available services with an increased level of professionalism, competency, efficiency and proficiency resulting in safer, more accurate and fluid services from day one on the job (long term).
- In large healthcare networks it can provide easy access to well trained recruits, with a working knowledge of the system (long term).
- Future trend will be towards large healthcare networks.

Funding Routes

- ♦ **Institutional Commitment** – the institution understands and recognizes the vital role of Medical Physicists in the technologically driven programs such as Radiology and Radiation Oncology and therefore strategically chooses to fund residency positions.
- ♦ **Departmental Commitment**- the department understands and recognizes the role of the trainees and therefore supports new training programs development.
- ♦ **Physics Division Commitment**- advocates for the future of the profession and the short and long term values of a training program in the technologically advanced Radiology and Radiation Oncology medical environments.

Funding Routes

- ♦ **The Department/Division** may trade in positions (Dosimetry and/or Junior Physicist slots) at the main center or network centers, to create internal funding for residency positions .

- Also in large healthcare networks is possible to trade single full time physics slot for multiple residency slots (2-3 positions)
- ♦ Approved **GME** positions
- ♦ **Grants** (Training, Industry, Research)

Funding Routes: Grants

- ♦ **Training Grants:** can be from governmental sources, industry, professional societies, etc.; (for example: AAPM/ASTRO, NIH, Vendors).
- ♦ **Industry Grants:** can be explored with vendors which traditionally are funding research (for example have a combined 2 year clinical + 1 year research).
- ♦ **Research Grants:** normally could fund a 1 to 2 years research component of a 3 to 4 years program (NIH, NSF, Foundations, etc).

Funding Routes (Department/Division)

Making the case for internal funding

- ♦ In order for a residency program to become CAMPEP accredited a clear rotation structure with goals and competencies has to be in place for 24 months of clinical training.
- ♦ The distribution of activities and tasks to be performed to achieve the goals and competencies of each rotations also identifies the degree of supervision required by a resident.
- ♦ Usually the degree of supervision decreases from the beginning to the end of rotation, and from the first to the second year of training in correlation with the resident performance.
- ♦ Based on this one could argue the projected contributions of the resident to the clinical load of the Physics group, as towards the end of the training (last 6-8 months) residents should have developed significant skills which could benefit the institution.

Funding Routes(Department/Division)

- ♦ Residents contributions to the clinical output help to create the argument to trade in Dosimetry and/or Junior physics positions at the main center or network centers.
 - Justify the use of Departmental/Physics Division funding.

For example:

- The cost of a Physics FTE including fringe benefits ranges from \$160- \$200k and would cover for 2 to 3 FTE resident positions.
- The cost of a Dosimetry FTE including fringe benefits ranges from \$100k to \$130k and would cover for 1 to 2 FTE resident positions including fringe benefits.
- The cost of a 1/2 FTE Physicist or Dosimetrist would cover for at least 1 FTE Resident position including fringe benefits.

Funding Routes(Institutional/GME)

- ♦ Approved **Graduate Medical Education(GME)** positions funded based on:

Medicare Funds:

- Medicare for Medical (MDs)
- Medicare for Paramedical training (for ex. Pharmacists, Physicists...) - 42 CFR Part 413.85(CAMPEP website)

Institutional:

- Funds provided from the institution and are included in the overhead of the institution.

Funding Routes(Medicare)

Medicare for Paramedical Training Funding Requires:

- A residency program to be CAMPEP accredited.
- The institution to support the integration of the Medical Physics Residency Program with the Paramedical Education Funding.
- Residents to be Hospital employees.
- An Annual Medicare Cost Report to be generated and filed.

Funding Routes(Medicare Cost Report)

- ♦ Salary and Benefit Analysis for each Medical Physics Resident Example:

- Following the MD residents yearly salaries is the easiest route.

- For example if a resident salary would be \$ 50,000, the corresponding costs of benefits may be about \$16,000 (32% of the annual salary). Total- \$ 66,000 .

Funding Routes(Medicare Cost Report)

- **Physics Resident Personal Development Funds** are usually a couple of thousand dollars a year and usually contain:

- Books
- Travel
- Phones

Note: This fund varies among institutions.

- **Departmental costs:**

- Space
- Parking
- Computer

Note: Provided by the Business Office of the department .

Funding Routes(Medicare Cost Report) Rotation Schedule Example:

Rotation Schedule Spring 2009-2010

March 2010 - July 2010					
Resident	Date	Mentor	Rotation	Service	Machine
	3/1/10-7/1/10		Beam Data Collection/Radiation Safety	Invo-dometry/Chart Rounds	Linac 2 (primary)
	3/1/10-7/1/10		Beam Data Collection/Radiation Safety	Chart Rounds/IM School (primary)	Linac 3 (primary)
	3/1/10-7/1/10		Beam Data Collection/Radiation Safety	Invo-dometry/MRT QA	Linac 1 (primary)
	3/8/10-7/1/10		General Clinical Practice (PCAM)	PCW coordinator	Linac 3 (secondary)
	3/8/10-7/1/10		Brachytherapy	Vel School (secondary)	Linac 2 (secondary)

Funding Routes(Medicare Cost Report) Mentor Effort Distribution Example

ROYALTYSM ZIMMERBISSEMENT
MEDICAL PHYSICIAN RESIDENCY PROGRAM
FACULTY INVOLVED IN MENTORING

Faculty	PBD	MS			PBD			PBD			PBD			
		I	II	III	I	II	III	I	II	III	I	II	III	
14%				X (0.7)										
16.5%				X (0.7)										
3.5%														
14%	X (0.7)													X (0.3)
16.5%	X (0.7)													
21%	X (0.7)			X (0.3)									X (0.3)	X (0.3)
3.5%														
16.5%	X (0.7)												X (0.7)	
14%				X (0.3)								X (0.7)		
3.5%														
3%				X (0.3)									X (0.3)	
3%				X (0.3)									X (0.3)	
3.5%														X (0.3)
3.5%														X (0.3)

Funding Routes(Medicare Cost Report) Individual Mentor Effort Report Example

Hospital of
Activity Effort Report
PFR June 30, 2010

Name: V. ENTIC
 Department: Radiotherapy/Oncology
 Department #: _____
 Social Security #: _____

The average time spent during this period can be allocated in the following manner based on hours spent on each activity:

ADMINISTRATIONS: _____ %
 EDUCATION (Instructional time for residents, meeting or on medical students in an accepted program): 3.6 %
 CLINICAL (Direct patient related care): _____ %
 TOTAL: 100 %

This report represents a reasonable estimate of HUP compensated effort for the year ending June 30, 2007.

Employee Signature: _____ Date: _____
 Title: _____ Dept Head Signature: _____

Funding Routes(Medicare Cost Report) Preparing for the Future...

- ♦ The Total Cost per Resident and potentially reimbursed amount:

-The amount reimbursed is related to the percentage of patients treated at each institution and the competition among paramedical programs for the allotted Medicare money for paramedical education.

Example: The total cost of a resident may be around \$150k+, while the reimbursed amount based on the percentage of Medicare patients treated at the institution may be only \$50k.

Summary

- ♦ The Need and Value of Medical Physics Residency Programs is clear. However, the start up strategy and maintenance of a program has to be tailored to the realities of each institutions.

Thank you.

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