

AbstractID: 3342 Title: Estimating Medical Physicist FTE using the 2003 Abt survey and procedure volumes in Radiation Therapy

Purpose:

To estimate radiation therapy medical physicist FTE needs based on procedure numbers and published medical physicist work survey data.

Method and Materials:

A spreadsheet was developed to combine procedure volumes requiring medical physicist effort with procedural time values extracted from the 2003 Abt survey and a previous survey on medical physics costs (Herman et. al. JACMP, 2003) and included:

Patient Procedures: Median procedural time efforts and annual volumes for CPT codes 77295, 77300-77370.

Commissioning and QA: Annualized time for commissioning and QA per major clinical system.

Education: Contact teaching time for medical residents, allied health and medical physics trainees with a preparation multiplier of 3 for didactic courses.

Research: A 10% factor was used, recognizing that development work varies considerably between practices.

Administration: A value between 10 and 15% was recommended by ACR.

FTE needs were summarized for a 3 machine practice (800 new patients), IMRT (250 pts per year), HDR(50), Radiosurgery(60), prostate implants(40) and TBI(30). Physician residents and one medical physics trainee are taught.

Results:

A total of 9.4 FTE was calculated based on: Patient Procedures – 6.67, Commissioning and QA - 1.04

Education: - 0.11, Research: - 0.78, Administration: - 0.78. With shared duties, no specials and an efficient electronic record, for example, the FTE could be reduced to 7.3 FTE.

Conclusion:

A medical physics staffing complement of between 7.3 and 9.4 FTE is suggested by a model based on workloads from the 2003 Abt and procedure volumes in a clinic with 800 new patients. The range is due to the sharing of duties (with other professionals), efficiency and the absence of some procedures. The number of hours committed by the medical physicist for procedural effort versus non procedural effort must be evaluated/validated against one's specific practice to make proper use of data from the Abt.