

Talk at Splinter Meeting

PhD Students Meeting

## MEDICAL PHYSICISTS: A CAREER IN HEALTH CARE SECTOR

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Due to the inherent risk when using ionization radiation, medical physicists are required in several medical fields. Medical physicists, officially called medical physics experts (MPEs), are working mainly in clinics for radiology, nuclear medicine, and radiotherapy, or in medical industry. Typical requirement for this kind of profession is a bachelor or master degree from a university or technical college in physics or similar branch of study. After this in Germany two years of clinical training are required to be certified as MPE. In addition radioprotection courses must be attended and after the two year period an interview in presence of the radioprotection authorities has to be passed. In addition to that a board certification of the DGMP (Deutsche Gesellschaft für Medizinische Physik) can be attained. For this the requirements are higher but not yet mandatory for working in clinics.

Most MPEs are employed in clinics of radiotherapy. They work close together e.g. with radiotherapists, technicians and nurses. Thus the work of an MPE is very inter-disciplinary. The responsibilities for a MPE in radiotherapy clinics are very high. In these clinics mainly cancer patients are treated with radiation produced by high energy electron linear accelerators (up to 20 MV). Medical physicists are in charge of 3D dose calculation, the dosimetry of the treatment units, radioprotection, quality assurance of treatment and imaging devices, development and implementation of new technology, and teaching of staff in radio-physical topics. Moreover they are highly involved when new equipment is purchased. In university clinics the physicists are also working on scientific projects, often together with radiotherapists.