The Role of MPE/QE/RPO – The View of the IOMP

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The Medical Physicist as Health Professional [IOMP Pol.Stat. 1]

Medical physicists working in clinical environment are health professionals, with education and specialist training in the concepts and techniques of applying physics in medicine, competent to practice independently in one or more of the subfields (specialties) of medical physics.

Radiation Oncology Physics
Medical Imaging Physics
Nuclear Medicine Physics
Medical Health Physics (Radiation Protection in Medicine)
Non-ionizing Medical Radiation Physics
Physiological Measurement

IOMP Policy Statement 1: Medical Physics

"Medical physics is a branch of physics that is concerned with the application of physics concepts and techniques to the diagnosis and treatment of human diseases."

Subfields:

- Radiation Oncology Physics
- Medical Imaging Physics
- Nuclear Medicine Physics
- Non-ionizing Radiation Physics
- Physiological Measurements
- Links to neighbouring fields

IOMP Policy Statement 2: Education & Training

Medical physicists (MPs) working as health professionals shall **demonstrate competency in their discipline by obtaining the appropriate educational qualification and clinical competency** training in one or more sub-fields of medical physics.

Basic knowledge of the other sub-fields is also required.

MPs practicing in hospitals/clinical environments shall also participate in a **continual professional development** program.

IOMP Policy Statement 2: Education & Training Requirements

University degree or equivalent majoring in physics or an appropriate engineering science subject

Phase 1:
BSc in physics or equivalent in physics/engineering

Phase 2:
Postgraduate program at a **master´s** degree level in medical physics or equivalent degree in physics/ engineering science subject

Professional Recognition

2 levels:

- Basic Education - by Validation and Accreditation of MSc. courses

- Basic Education+Professional Training Program - by Certification through a national or international body

Professional Training Requirement

- Clinical competency training program (formal residency or clinical training program) under supervision of a certified/licenced Medical Physicist in that field.
- Minimum duration **not less than 2 years** full time equivalent.
- **Not less than 1 year** for each additional **subfield**
- Appropriate syllabi (e.g. IAEA, EMERALD-EMIT)

State Regulation of the Medical Physics Health Professional

- Occupation of '**Medical Physicist**' recognized by the ILO through the International Standard Classification of Occupations, 2008 (ISCO-08)

  Tasks include –
  (e) ensuring the ***safe and effective delivery of radiation (ionising and non-ionising) to patients*** *to achieve a diagnostic or therapeutic result as prescribed by a medical practitioner;*

- IAEA Safety Standards: Radiation Protection and Safety of Radiation Sources: International Basic Safety Standard (Interim)

IOMP – IAEA
Basic Safety Standard (BSS)

IOMP

Medical Physicist

Health Professional, special E&T, competent in their discipline by obtaining the appropriate **educational qualification and clinical competency training** in one or more sub-fields of medical physics.

Subfield:

Radiation Protection

BSS

Medical Physicist

Health Professional, special E&T, competent to practise independently in one or more of the subfields (specialities) of MP

Radiation Protection Officer

Technically competent in RP matters for a given type of practice.

IOMP – IAEA
Basic Safety Standard (BSS)

IOMP

Certified Medical Physicist (CMP)

A CMP is a medical physicist who has been certified by a national or an international professional certification body to have the competence to practice independently in one or more sub-fields of medical physics.

BSS

Qualified Expert

An individual who, by virtue of certification by appropriate boards … is recognized as having expertise in a relevant field of specialization, e.g. **medical physics, radiation protection**, …

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