An International System for the Certification of Medical Physicists

Colin G. Orton, Ph.D.
Professor Emeritus,
Wayne State University,
Detroit, Michigan, USA

Origins of the International Medical Physics Certification Board

- The IOMP established a Task Group to investigate formation of an International Certification Board in early 2009
- Goal was to improve the quality of clinical medical physicists and the profession
Established on May 23, 2010
11 Charter Members – ABFM, ACMP, ACPSEM, CSMP, CSMPT, FMOFM, HKAMP, IMPS, KSMP, LAMP, and NAMP
1 Observing Member – JSMP
Model certification program adopted 2011
By-Laws adopted 2012
Officers elected to take office January 2014

IMPCB Board of Directors

President: Colin Orton
Chief Executive Officer: Raymond K. Wu
Secretary General: Ti-Chuang (Timothy) Chiang
Registrar and Chair of Records Committee: Tae Suk Suh
Chief Examiner and Chair Accreditation Committee: Tomas Kron
Treasurer: Alejandro Rodriguez Laguna
At-Large Board Members: Ervin B. Podgorsak, Xiance Jin, Siyong Kim, Kin Yin Cheung
The objectives and purposes of the Board

- To establish minimum standards and improve the practice of medical physics
- To develop standards and procedures for the certification of medical physicists
- To establish the infrastructure, requirements and assessment procedures for the accreditation of medical physics certification programs

The objectives and purposes of the Board (cont’d.)

- To establish and evaluate qualifications of candidates requesting examination for certification in the field of medical physics
- To arrange, and conduct examinations to test the competence of candidates for certification in the field of medical physics
- To grant and issue certificates in the field of medical physics to applicants who have been found qualified by the Board
- To maintain a registry of holders of such certificates
IMPCB Model Program

- Certification should be by examination, conducted by a country-specific, geographically regional or other designated Medical Physics Certification Board
- Model Program developed in accord with IOMP Policy Statement No. 2

IOMP Policy Statement No. 2: Basic Requirements for Education and Training of Medical Physicists

- To serve as a reference for medical physics organizations, education institutions and health care providers and authorities
  
  for planning and development of their national infrastructures for education, training and certification of medical physicists and for maintenance of standards of practice
Policy Statement No. 2: Minimum Educational Qualifications

- A university degree or equivalent (level corresponding to a master’s degree) majoring in medical physics or an appropriate science subject
- The suitability of a certain education program to provide the necessary academic knowledge for the following professional training could be established through a suitable national or international validation/accreditation body

Policy Statement No. 2: Professional Training Requirement

- Medical physicists who have clinical responsibilities should have received (additionally to their education) a clinical competency training
  - preferably in the form of a formal residency or an equivalent clinical training program, for a duration appropriate to their roles and responsibilities
  - For those jurisdictions in which an accreditation program exists for residencies, the residency should be an accredited program
Policy Statement No. 2: Clinical Training

- At least 2 years full-time equivalent under the direct supervision of a Certified Medical Physicist (CMP) or equivalent
- Should be well-structured and designed to provide the trainee with extensive hands-on experience on a comprehensive range of clinical physics work processes and services

Policy Statement No. 2: Professional Certification

- Medical physicists practicing in medical institutions or those with clinical responsibilities should be subject to professional certification
- Medical physics organizations or health competent authorities should establish their own national professional certification systems to facilitate such process
- In countries where the establishment of such a national certification system is impractical, considerations should be made to have their MPs certified by an appropriate external certification body
Policy Statement No. 2: Maintenance of Certification

- A professional competency maintenance scheme should be implemented for CMPs who have clinical responsibilities.
- This could be in the form of re-certification after an appropriate period of time and/or participation in a mandatory Continual Professional Development (CPD) program.

Policy Statement No. 2: CPD Program

- Medical physics organizations should establish and maintain their own national CPD systems to support the continual professional development of their members.
- In countries in which establishment of such a CPD system is impractical, arrangements should be made for the medical physicists to enter a well-established external CPD system.
Policy Statement No. 2: Certification Boards

- To ensure that an appropriate level of professional standard can be achieved and maintained, national certification systems should be subject to appropriate quality audits
- This could be achieved through an independent accreditation process conducted by a well-established national or international certification or accreditation body

IMPCB Model Program Parts

- Part I (written exam) – to test the competence of the candidate in fundamental aspects of medical physics (General Medical Physics)
- Part II (written exam) – to determine the competence of the candidate in a specialty area of medical physics
- Part III (Oral exam) – to determine the candidate’s knowledge and fitness to practice clinical medical physics in a designated specialty
Continual Professional Development

To maintain an IMPCB certificate, a certified medical physicist must satisfy the continual professional development (CPD) requirements.

IMPCB Accreditation Committee

- Created three subcommittees AC1, AC2, and AC3
- The charge is to establish guidelines and procedures to evaluate national certification programs applying for accreditation based on the Model Certification Program Parts I, II, and III requirements, respectively
- To prepare operational details such as check lists for evaluation, cost effective methods to do evaluations, etc.
AC – Chaired by Tomas Kron

- AC1 – Chaired by Carmel Caruana
- AC2 – Chaired by Ervin Podgorsak
- AC3 – Chaired by Adel Mustafa

Challenges Ahead

- Accredit national certification programs
- Help countries develop national Boards
- Issue certificates
- Maintain a registry of certified medical physicists who meet CPD requirements
- Conduct International Board Examinations
IMPCB Website

- www.IMPCB.org
- History
- Model Program
- By-Laws