

AFOMP Policy Statement No. 4: recommendations for continuing professional development systems for medical physicists in AFOMP countries

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Abstract This policy statement, which is the fourth of a series of documents being prepared by the Asia-Oceania Federation of Organizations for Medical Physics Committees Professional Development Committee, gives guidance on how member countries could develop a continuing professional development system for ensuring that its clinical medical physicists are up-to-date in their knowledge and practice. It is not intended to be prescriptive as there are already several CPD systems successfully operated by AFOMP member countries and elsewhere that vary considerably in scope and structure according to local culture, practice and legislation but all of which are capable of ensuring that physicists are up-to-date. It is intended to be

advisory and set out options for member countries to develop their individual CPD systems.

Keywords Continuing professional development · Continuing professional education · Medical physicists · Policy

Introduction

The Asia-Oceania Federation of Organizations for Medical Physics (AFOMP) was founded during the World Congress on Medical Physics and Biomedical Engineering in Chicago in July 2000. The current membership includes 16 national organizations which together represent about

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3,000 medical physicists. AFOMP was officially inaugurated and admitted by IOMP as one of its Regional Chapters in 2000.

The formation of AFOMP aims to provide a solid platform for closer collaboration and mutual support amongst the medical physics organizations in the Asia and Oceania regions for the primary purpose of promoting the advancement of medical physics and related scientific activities and the development of the standard of practice and professional status of the medical physicists. To help achieve these goals and objectives, AFOMP has established three committees, namely Professional Development Committee (PDC), Education & Training Committee (ETC) and Scientific Committee (SC) to work on a number of important tasks. Among them are drafting of a set of policy statements which give recommendations and guidelines on issues such as the definitions on the roles and responsibility of medical physicists, their professional and quality standards, and the standard and structure of education and training of medical physicists.

This policy statement, which is the fourth of a series of documents being prepared by the joint efforts of the Committees [1–3], gives guidance on how member countries could develop a Continuing Professional Development (CPD) system for ensuring that its clinical medical physicists are up-to-date in their knowledge and practice. It is not intended to be prescriptive as there are already several CPD systems successfully operated by AFOMP member countries and elsewhere [4–8] that vary considerably in scope and structure according to local culture, practice and legislation but all of which are capable of ensuring that physicists are up-to-date. It is intended to be advisory and set out options for member countries to develop their individual CPD systems.

Why should physicists undertake continuing professional development?

Medical physicists need to undertake CPD to keep up-to-date in their field. This is for the benefit of the individual,

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the institution that they work for, and in the case of those who are clinically involved, for the benefit of patients.

It may also be a requirement of the national medical physics professional organization that clinical physicists participate in a formal CPD scheme to maintain their certification or license to practice. This should be a legal requirement in all AFOMP countries where there is a legal requirement for physicists to be certified or licensed to practice clinically.

Continuing professional development and continuing professional education

Continuing professional development consists of a range of learning activities which medical physicists participate into ensure that they retain their capacity to practice safely, effectively and legally within their evolving scope of practice. It may consist strictly of Continuing Professional Education (CPE) such as attending courses and conferences, workshops and self-directed learning. It may also encompass a wide range of activities, both professional and educational, that contribute to the development and further education of medical physicists throughout their careers.

Ensuring the support of participants

A CPD system should be constructed so that it ensures that its participants' professional development needs at all stages of their careers are met. At the same time, it must not be onerous in its requirements. The system should not neither require that participants devote excessive amounts of effort to achieve a system's requirements nor require excessive amounts of documentation to be gathered for auditing purposes.

The amount of CPD required

The requirements of a CPD system should equate to the equivalent of approximately one week of full-time equivalent continuing professional educational activity per year. This undertaking may consist of activities such as attending lectures, tutorials, seminars, workshops and self-directed learning. In addition other activities such as publishing research, examining, mentoring, professional service may be included. It is recommended that participants should be required to include a range of different activities, although this range may include only continuing professional education activities.

Accounting for CPD activity

It is recommended that member countries have points-based system to quantify a physicist's CPD participation

and achievements. A points-based system is one where medical physicists are awarded 'points' according to a defined scale for undertaking various CPD activities and must achieve a defined number of points over a specified period. A typical period may be 3–5 years.

The system should specify

- The number of points that should be accumulated in that period
- The minimum number of points that must be accumulated in any one year
- The maximum number of points that can be accumulated in any one year
- When a year starts and finishes which may be a calendar year or a year from the date at which the physicist commenced in the CPD system.

It must be emphasized that CPD is a means to an end, and not an end in itself. CPD must not be done for the sake of just achieving points to fulfill a requirement. Its purpose is to professionally develop oneself as a competent medical physicist.

The system should specify how many points an individual may obtain in a year for a particular activity or range of activities. The points allocations used in other countries are summarized in [4].

A system may award points for different activities according to its own scale. Suggested activities are listed below for guidance, and there is no expectation that all activities will be included in any one system.

- i. *Attending courses/seminars/lectures/workshops/scientific meetings etc.* The professional body administering the CPD system should approve the activities as having a set points value. The point value of an activity may be increased if there is an examination after the activity to ensure that the participants have achieved an acceptable level of knowledge of the content. Point values may also depend on other factors such as whether the course, etc., is locally based or whether it is an international event.
- ii. *Formal on-the-job training, interactive learning with the internet or CD ROMs with evaluation, self-directed learning, visits to other institutions, study breaks etc.* Self-directed learning in the form of reading journal papers should be planned in conjunction with a controlling medical physicist rather than being done on an ad hoc basis. Point allocation for these activities may need to be awarded on a case-by-case basis.
- iii. *Teaching, lecturing, presenting at seminars and workshops, producing teaching materials and CD ROMs etc.* Teaching may be a valuable learning tool as it requires the teachers to update, evaluate, analyze and order what they intend to present to participants. The basis on which points will be awarded for such activities may vary considerably and may not necessarily reflect the amount of time taken in the preparation of the teaching activity. Typically a higher number of points will be awarded for delivering a new lecture compared to the number awarded for repeating an existing lecture. Also, a higher number of points could be awarded for delivering a lecture to medical physics colleagues compared to the number awarded for delivering a lecture to a general audience.
- iv. *Research publication at conferences, in journals, in books etc.* The publication of research results is universally accepted as a CPD activity. Points can be awarded according to the medium in which the research is presented (journal, conference, book, etc.) and according to the input of those involved (e.g., a higher number of points may be awarded to the first author than to the second and remaining authors).
- v. *Editing and reviewing.* This can be acceptable as a CPD activity as it necessarily involves critical review of original research and comparison with other published research. It is therefore both educational and analytical.
- vi. *Developing new technologies and procedures.* This is widely accepted as a CPD activity as it requires medical physicists to become familiar with new technologies and procedures and therefore is a learning exercise. There is usually a requirement that a formal report documenting technology/procedure must be produced before CPD points are awarded.
- vii. *Professional service (i.e. membership in or chairing of task groups, professional society committees, conference committees, etc.).* As many forms of professional service require medical physicists to become familiar with a variety of new technical material and often require that material to be analyzed in some way, there is often a definite educational aspect to the service that could be recognized.
- viii. *Supervision and mentoring of residents and research students.* Participating in these activities has an educational aspect for the supervisor as well as for the students or residents being supervised. The supervisor necessarily has to be familiar with the research being carried out by the student and needs to stay up-to date with the knowledge and skills that are required of a resident.
- ix. *Thesis examination.* Examining theses involves critical review and analysis of new knowledge and can be regarded as a CPD activity.
- x. *Obtaining higher qualifications.* Points could be awarded for enrolment and/or completion of higher degrees and other pertinent qualifications
- xi. *Employment.* Points could be awarded according to the proportion of full-time that a physicist is currently

involved in clinical practice. There could be a requirement that physicists gain a minimum number of points in a year to ensure that they are still actively practicing in the profession.

Remotely located physicists

In some countries some medical physicists are sufficiently remotely located from their colleagues that it can be difficult for them to attend some CPD activities that others in large centers find it easy to access. Measures such as crediting a larger number of points for attending teaching activities, or allowing a higher number of points to be obtained for self-directed learning or engaging in online lectures and webinars (e.g. [9]), must be built into the CPD system.

Periods of leave

Physicists may suspend their employment for a period due to personal reasons or changing their employment. A system must be able to accommodate such participants by making provision for them to become up-to-date or to maintain their proficiency while their employment is suspended.

Actions to be taken if sufficient points are not achieved

If a physicist does not accumulate sufficient points in a specified period where compliance with a CPD scheme is a requirement for license or certification retention, then the CPD system should specifically state what actions may be taken. For example, participants may:

- Become re-certified through the normal examination process or through an oral exam
- Be required to make up their points deficit within a specified period
- Be required to be supervised by a certified or licensed physicist
- Be required to undertake a specified remedial program
- Be given the opportunity to achieve, within a limited time, the minimum number of points normally required to be accumulated in one year.

Specifying activities for which points may not be awarded

A CPD system may specifically exclude some activities that are accepted by other systems as being valid CPD activities

Recording and auditing

There must be an auditing process to ensure that the CPD requirements are being met. There may be a requirement for an individual to keep a record of their CPD which is checked at regular intervals to ensure that the record is valid (i.e. it is audited) and that sufficient activities have been undertaken. The auditing may be done on all individuals, or a random sample of individuals may be audited. Individuals may be required to keep evidence of what they have done and this may need to be countersigned by a superior.

Sharing resources

The production of training and education resources for CPD is costly. All AFOMP member countries should, where possible, make their resources freely available to other countries.

Appendix

Membership of the AFOMP Professional Development Committee

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