CONTINUING PROFESSIONAL DEVELOPMENT FOR MEDICAL PHYSICISTS IN FRANCE

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Abstract— **Since 2017, medical physicists in France have been recognized as healthcare professionals. As a consequence, they entered the continuing professional development (CPD) programme for healthcare professionals. This implies creating the corresponding CPD bodies for medical physicists and to build a continuing education offer to comply with the CPD requirements, with the aim to improve the overall quality of patient care.**

Keywords— **medical physics, continuing professional development (CPD), training.**

I. Introduction

After the completion of a formal initial training, continuing education involves maintaining and enhancing the knowledge, skills and experience related to the professional activities.

The first initiative for a national continuing education (CE) coordination open to medical physicists was made in 1999 by the French society of medical physics (SFPM, société française de physique médicale). A registration scheme was created, based on EFOMP (European Federation of Organisations for Medical Physics) recommendations [1]. It was only opened to SFPM members and based on a voluntary process. The registration scheme was approved by EFOMP in 2001.

Since 2004, medical physicists in France have an obligation of continuing education (CE). It was first stated by ministerial order [2] that medical physicists should, as part of their CE, update their theoretical and practical knowledge in order to fulfil their missions. In 2011, a new ministerial order [3] complemented this statement by adding that professional practice analysis and evaluation could be part of a CE for medical physicists, making it similar to the healthcare professionals CPD scheme (DPC for "développement professionnel continu" in French).

The SFPM registration scheme remained the only framework formalizing and following the CE obligation for medical physicists.

In 2016, EFOMP updated its "recommended guidelines on national registration schemes for Medical Physicists" [4] and the SFPM registration scheme was once again approved by EFOMP in 2020.

In 2009 a CPD framework was established in order for healthcare professionals to maintain and update their knowledge and skills and to improve their practices.

Since 2017, medical physicists have been recognised by the French government as healthcare professionals [5], thus entering the CPD framework.

This paper presents the different steps to enter the healthcare professionals CPD scheme as well as the progresses and the pitfalls of entering a system designed to accommodate all healthcare professionals.

II. Healthcare professional CPD bodies

Figure 1 presents an overview of the different CPD bodies.

The CPD is supervised by a national agency, later referred to as ANDPC (for "agence nationale de développement professionnel continu" in French), whose CEO is appointed by the ministry of Health. Its role is to guarantee that the CPD framework is independent of any interest related to the industry and economical stakeholders.

Each profession is represented by a national professional council (CNP for "Conseil National professionnel" in French) and an independent scientific commission (CSI for "commission scientifique indépendante" in French) constituted of national representatives of the profession. The CNP and CSI must be independent to avoid any conflict of interest. Members of CNP are non-profit organisations acting in the field of medical physics and cannot be a CPD organisation (ODPC for "organisme de développement profesionnel continu" in French) providing CPD courses. There are currently two members of the medical physicist CNP (CN2PM, www.cn2pm.fr): the French society of medical physics (SFPM, www.sfpm.fr) and the association of medical physicists working in private institutions (APMESSP, www.apmessp.fr). The CNP is also recognized as an official representative of medical physicists for the French Ministry of Health. CSI members are appointed by the ANDPC upon CNP recommendations.

The primary role of the CNP is to define the priority orientations for a 3-year period. It also establishes the CPD scheme to follow in order to comply with ANDPC requirements.

CPD training courses are proposed by an ODPC, an organisation or company that has been qualified by ANDPC for healthcare professionals CPD. A training course has to be approved by ANDPC to be eligible to be taken into account in the CPD scheme. The scientific content of CPD courses is

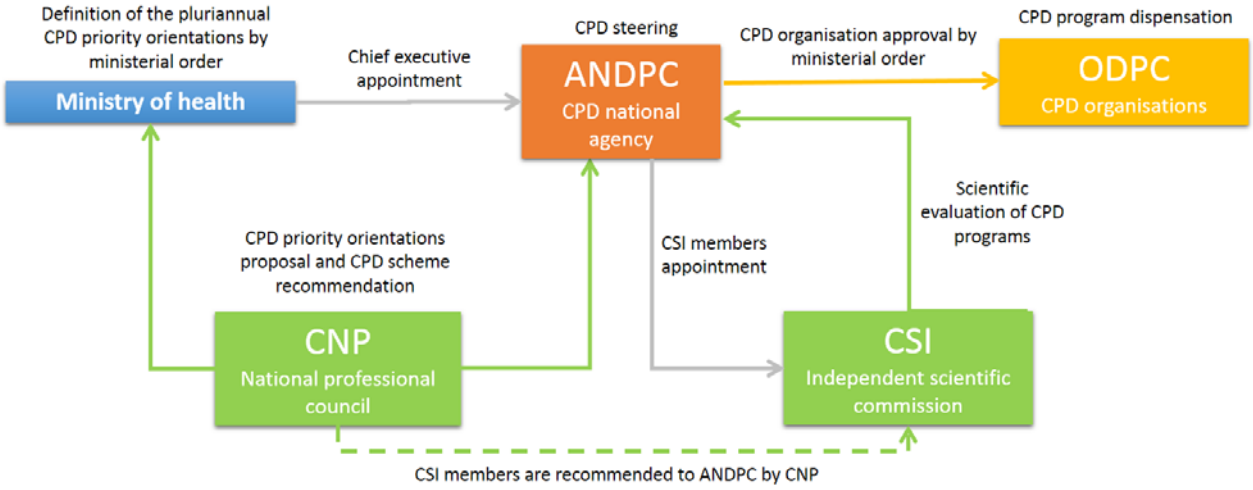

Fig. 1 Overview of CPD bodies

evaluated by the CSI of the profession to which the courses are dedicated. A CPD course can be multidisciplinary, hence the corresponding CSIs would have to be consulted by the ANDPC.

An ODPC is a training organisation that has applied to the ANDPC to become an official DPC organisation. It has to demonstrate its ability to run a programme for healthcare professionals in terms of organisation, scientific committee and to give a programme example fulfilling the agency criteria such as being about one of the priority orientations, having adequate pedagogical methods, performing prior and post assessment of the trainees, etc.

III. CNP RECOMMENDATIONS

CPD is organized as triennial periods. For each period, the CNPs are asked by the ANDPC to define the priority orientations for DPC courses and what should be the DPC scheme to follow to fulfill the requirements.

Priority training orientations are of two types: general orientations that can apply to different healthcare professions and orientations specific to the profession. They can be found online [7].

For the 2020-22 period, the medical physicists CNP (CN2PM) has selected the following general orientations:

- Risk management
- Adverse event handling
- Appropriate use of medical devices
- Artificial intelligence, data science, etc.
- Appropriate use of computerized tools for patient data
- Cancer management, in particular for children, adolescents and young adults

Specific orientations for medical physicists were also defined:

- Medical imaging techniques with a particular focus on the new technologies for image acquisition and treatment, information analysis and database, exposition estimate in diagnostic and interventional imaging using radiations.
- Therapeutic techniques involving radiations with a particular focus on the new technologies, image guided therapy, absorbed dose evaluation, modelling and artificial intelligence, and process control.

The CPD schemes have to follow the methods defined by the Haute Autorité de la Santé (HAS) [8], an independent health authority that has a scientific role in the evaluation of drugs, medical devices and professional practices. Their actions can be divided into three categories: teaching, risk management and professional practice evaluation. Training must not only target a better knowledge in a particular field but also trigger a reflection on professional practices and quality management in order to increase the general quality of care.

Medical physics CPD scheme recommendations are as follows:

- At least two of the three categories (teaching course, risk management and professional practice evaluation) must be present.
- At least one action must be part of the national priority orientations described above.

  Actions can be independent or combined in an integrated programme (for example, a teaching course on a given topic with a session on risk management on the same topic).

This scheme is considered to be the minimum CPD scheme in order to maintain the overall knowledge and skills on professional practices. Nonetheless the professional can go beyond these recommendations and follow other CPD actions, if necessary for his/her professional practice.

IV. Discussion

After more than 60 years of existence in France, medical physicists have gained recognition as healthcare professionals.

This allows medical physicists to enter a more structured continuing education (CE) framework called continuous professional development (CPD). This is a great opportunity to develop and maintain the quality of care. Nevertheless, it comes with several constraints.

First, there is an independence rule between CSI, CNP and its members SFPM and APMESSP: SFPM and APMESSP board individuals cannot be CNP board members. CSI members cannot be CNP members and cannot be part of the scientific committee of an ODPC. Although this rule makes perfect sense on the ethical level, it is more difficult for the small French medical physicist community (around 800 individuals) to find volunteers to be part of national professional boards.

Until now, the French Society of Medical Physics (SFPM) was the main provider of CE courses in the field of medical physics. Although it still can offer teaching programmes, these programmes cannot be CPD approved since SFPM is a member of the CNP.

The current three-year CPD period started in 2020, before all CPD institutions for medical physicists were in place and in the COVID crisis context. The first ANDPC approved trainings were only available at the end of 2021, making it difficult for all medical physicists to comply with the CNP recommendations by the end of the period. Currently it is the employer's responsibility to check the CPD compliance of healthcare professionals. No fine or enforcement actions are planned in CPD law but in case of an accident or a malpractice, it will be seen as an aggravating circumstance, although there will certainly be a tolerance for the first three-year period.

The healthcare CPD organisation applies to all healthcare professionals, from caregiver to opticians and specialized doctors. It is therefore not considering the specificities for each profession, and it is very rigid. Nevertheless, ANDPC regularly gathers all healthcare profession representatives to get feedback in order to improve the system.

Before entering the healthcare CPD organisation, SFPM had a very comprehensive CPD registration scheme set up. It was going far beyond healthcare CPD recommendations and considered a larger set of training actions. The main flaw was that it was not mandatory. Medical physicist CNP is currently working on bringing the best of the two systems in a unified registration scheme, where its members could extract the CPD actions from their registration scheme.

V. Conclusions

Being recognized as a healthcare profession by the French government was a major breakthrough for medical physicists' relationship with national institutions. It offered a better recognition of the profession and a better integration in institutional discussions. Medical physicists entered the heathcare professional CPD programme. Several bodies had to be created and a change of training content and organization had to be set up. Despite the changes, the French medical physicist community has adapted to the new system and continues working to offer the best quality of care, while complying with national regulations.

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