Developing educators for continuing professional development

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ABSTRACT • RÉSUMÉ

Continuing professional development (CPD) is part of the medical education continuum, has been shown to produce improved physician practice and good patient outcomes, and is increasingly required for revalidation of medical licensure. CPD can be considered a discipline in its own right but is the least formally organized stage in medical education. CPD educators play a central role, but there has been remarkably little published work specifically describing CPD educators. This narrative review, using ophthalmology as exemplar medical specialty, describes trends affecting CPD educators and their sources, attributes, and development needs, mainly extrapolated from information regarding other medical educators in the medical education continuum spectrum. Future research needs are discussed.

Le développement professionnel continu (DPC) fait partie du continuum de la formation médicale, il a été démontré qu'il améliore la pratique des médecins et produit de bons résultats pour les patients, et il est de plus en plus exigé pour la revalidation du permis d'exercice de la médecine. Alors qu'il peut être considéré comme une discipline à part entière, le DPC constitue le stade le moins formellement organisé de la formation médicale. Les formateurs en DPC jouent un rôle essentiel, mais les travaux publiés qui les décrivent sont remarquablement peu nombreux. Cette revue narrative, dans laquelle l'ophtalmologie est la spécialité qui sert d'exemple, décrit des tendances touchant les formateurs en DPC, les milieux dont ils sont issus, leurs profils et leurs besoins de perfectionnement, extrapolées principalement à partir d'informations concernant d'autres pédagogues associés au continuum de la formation médicale. L'étude traite des besoins de recherche futurs.

Continuing medical education is a "continuous process of acquiring new knowledge and skills throughout one's professional life. As undergraduate and postgraduate education is insufficient to ensure lifelong physicians' competencies, it is essential to maintain the competencies of physicians, to remedy gaps in skills, and to enable professionals to respond to the challenges of rapidly growing knowledge and technologies, changing health needs and the social, political and economic factors of the practice of medicine."[1] The term "continuing professional development" (CPD) is used to emphasize the broader nature of physician's skills beyond clinical competency and the development of enhanced expertise. CPD is a documented, practice-based, and self-directed process; includes reflective learning and development goals; and incorporates both formal and informal learning.[2,3] Undertaking CPD is part of the competence continuum throughout the physician's professional medical life, although teaching CPD is not specifically mentioned.[4] Performing CPD has been shown to be effective in improving physician performance and patient outcomes.[5,6] Demonstration of CPD is increasingly required for revalidation/recertification for maintenance of professional licensure.[7]

CPD educators play a critical role in designing CPD programs, setting standards, delivering educational content, facilitating reflective learning, and enabling revalidation, but there have been remarkably few studies on CPD educators.[8] This paper aims to review trends affecting CPD educators, sources of CPD educators, their needs and attributes, and how CPD teachers can be developed. Most of the information is extrapolated from medical teachers in different parts of the medical education continuum since little evidence explicitly related to CPD in general, or related to ophthalmology and ophthalmology procedures, is published.

Trends Affecting CPD Educators

Medical knowledge is rapidly increasing, with PubMed citations growing at 5.6% annually between 1997 and 2006, giving a doubling time of 13 years,[9] and potential medicolegal implications for practicing physicians.[10] CPD models are evolving, for example, competency-based[11] and performance improvement models.[12]

The medical workforce is increasingly mobile, and transportable CPD qualifications are desirable.[13] National and supranational medical organizations[14–16] and global professional bodies such as the International Council of Ophthalmology[17] play an important role with reciprocal recognition agreements.

CPD educators are subject to increased accountability.[18] CPD programs are required to be justified in terms of cost- and time-effectiveness,[19] with demonstration of clear and measurable outcomes: participant's perception and satisfaction, competencies, professional performance, and meeting

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Table 1—Sources of CPD educators

Educator	Examples
Full-time university employee—tenured	Professor of ophthalmology or medicine Attending faculty Academic physician
Full-time professional-body -employee	Employee of UK Post Graduate Deanery Employee of professional ophthalmology association
Full-time hospital employee —ophthalmologist	Hospital consultant Medical trainer Preceptor Clinical teacher
Full-time hospital employee —trainee	Participant in ophthalmology training program
University employee—nontenured	Adjunct faculty Contingent faculty Part-time faculty Clinical teacher Clinical tutor
Part-time voluntary university affiliate	Honorary clinical senior lecturer, Department of Ophthalmology, University of Melbourne
Part-time voluntary community-based ophthalmologist	Part-time tutor of ophthalmology trainees

the provision of public health care needs.[20] Evaluation of the success of a CPD intervention is changing from hours spent in information dissemination to identification of change in practice behaviour and/or patient outcomes.[21,22] CPD is also accountable to regulatory bodies. This is particularly challenging in low-resource settings.[23]

Increased professionalism of medical educators[18] also affects CPD educators, facilitated by development of professional bodies, including Alliance for Continuing Education in the Health Professions and Society for Academic Continuing Medical Education.[24,25]

Sources of CPD Educators

CPD educators (Table 1) range from full-time university employees to voluntary, community-based physicians.[26] Some CPD educators may not identify as such; for example, full-time academic faculty identifying as scientists present their results with CPD as an incidental outcome. Diverse sources of CPD educators result in diversity of educational methods employed (Table 2) and in educational settings (Table 3). Diverse sources of CPD educators make it difficult to develop teaching standards and a sense of engagement with institutions to which they may be affiliated.[27]

Most educators are not specifically paid for their work as CPD educators. Some visiting speakers are paid by commercial sponsors, when control of content of an educational intervention is required to be concentrated on the speaker.[3]

Needs of CPD Educators

Studies have shown the need for formal instruction in teaching and assessment/appraisal skills for full-time hospital employees[28] and trainees,[29] and have emphasized communication skills.[30] A needs analysis of medical school faculty highlighted humanistic needs, including ongoing learning, work–life balance, and finding meaning in work. Younger faculty expressed the need for mentoring, scholarship, research, and career planning.[31,32] There was a marked discrepancy between the perceived needs of medical school faculty and senior administrators, where the latter prioritize time management, institutional outlook, teamwork, improved teaching, research, and clinical practice against the humanistic needs emphasized by the former.[31]

Evidence demonstrates that voluntary part-time medical school faculty members are internally motivated to teach, to be appreciative of their work being acknowledged with teaching-excellence awards,[32] and to find value in academic faculty membership in a medical school learning community.[33] CPD credit for teaching may be potentially useful.[34]

These findings extrapolated to CPD educators suggest the need for formal education in teaching, assessment, and

Table 2—Overview of CPD educational methods[65–67]

Educational method	Example
Audience response systems	Type of interaction associated with the use of audience response systems. It addresses knowledge objectives (used in combination with live lectures or discussion groups).
Case-based learning	Addresses high-order knowledge and skill objectives. Examples include hospital morbidity–mortality meetings, incident and "near-miss" review meetings, grand rounds, case-conferencing, audit review meetings, and problem-based learning.
Demonstration	Involves teaching a technique, usually procedural. Preferably using recordings, but live demonstrations occasionally used.
Discussion group	Addresses knowledge, especially application or higher-order knowledge.
Feedback	Addresses knowledge and decision making.
Lectures	Lectures address knowledge content. Given to varied audiences, including local ophthalmologists and international conferences, as visiting professor tour.
Mentor	Personal skills developmental relationship in which an experienced clinician helps a less-experienced clinician. It addresses higher-order cognitive and technical skills.
Observership	A form of clinical experience under supervision, which addresses skill, knowledge, decision making, and attitudinal objectives.
Programmed learning	Aims to manage clinician learning under controlled conditions. Addresses knowledge objectives sequentially.
Reading	Reading addresses knowledge content or background for attitudinal objectives. Includes journals and searching online.
Role play	Addresses skill, knowledge, and affective objectives.
Simulation	Addresses knowledge, team-working, decision-making, and technical skill objectives.
Standardized patient	Addresses skill and some knowledge and affective objectives. Usually used for communication and physical examination skills training and assessment.
"Teaching on the run"	Teaching in brief encounters, usually in a clinical setting. Addresses higher-order knowledge and decision making.