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Continuing professional development and Irish hospital doctors: a survey of current use and future needs

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ABSTRACT

Doctors rate clinical relevance and applicability as the most important determinants of continuing professional development (CPD) course selection. This study examined patterns of current CPD practice and perceived CPD needs among hospital doctors in Ireland across various clinical specialties. A cross-sectional survey was administered to doctors, focusing on the areas of training needs analysis, CPD course content and preferred course format. In total, 547 doctors identified doctor-patient communication as the skill ranked highest for importance and level of current performance. Workload/time organisation and stress management were areas where a skills deficiency was identified. Non-clinical CPD topics, including resilience training, management and communication skills, were preferred areas for future CPD offerings. All respondents favoured interactive, hands-on sessions. CPD course completion and preference patterns differed significantly across clinical specialties. These results highlight the importance of considering the individual needs and preferences of clinicians across clinical specialties to facilitate more effective CPD programmes.

KEYWORDS: Clinical specialty, continuing professional development, learning environment and training needs

Introduction

In a healthcare context, continuing professional development (CPD) consists of a range of activities undertaken in order to maintain clinical skills and knowledge, as well as competence in the delivery of patient-centred care.[1, 2] It is expected that medical professionals avail themselves of CPD opportunities to refresh, update and improve their clinical knowledge.

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CPD typically involves attendance at medical or professional conferences, small group learning sessions, simulation-based learning activities and access to e-learning resources.[3]

Internationally, most regulatory authorities have moved towards introducing mandatory CPD requirements for all physicians and, in some countries, these CPD requirements are part of revalidation programmes being developed by licensing bodies. Based on the provisions of the Medical Practitioners Act 2007, since May 2011, all doctors registered and working as general or specialist practitioners in Ireland have been required to complete CPD in order to maintain their education, knowledge and competence at an acceptable level. Specifically, doctors are required to complete 50 hours of CPD per year, which is spread across internal (maintenance of knowledge and skills), external (practice evaluation and development), personal learning and research/teaching categories. In addition, each doctor is expected to complete one clinical audit per year.

As European and North American professional bodies are increasingly implementing mandatory CPD programmes, research has investigated the relationship between CPD participation and improved healthcare service provision and patient outcomes. These studies have demonstrated a clear and positive relationship between CPD participation and diverse measures of physician performance, including peer assessment scores in a practice setting,[4] lower number of public complaints to relevant regulatory bodies[5] and quality of professional practice.[6]

Against the backdrop of a challenging economic environment, Ireland's health system has experienced significant budgetary pressure and this has produced a decrease in front-line staff morale and an increase in international migration.[7,8] Irish trainee doctors have referred to feeling undervalued by the system and have reported fatigue as well as heightened anxiety regarding clinical performance and decision-making skills.[8] These pressures are heightened by the recent shift in the role expectations of doctors, which has expanded beyond clinical knowledge and skills to include team management, administration and use of electronic records. Providing educational opportunities in such areas has become an important focus for CPD.[3, 9]

Considering that most doctors list the clinical relevance and applicability of the topic as the most important determinant of CPD selection,[10] CPD offerings may be improved by taking individual learning needs into account. This highlights the necessity for collection of data concerning current CPD practice and future CPD needs. While previous studies have focused on

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the CPD preferences of doctors from specific clinical specialties (eg Australasian geriatricians,[2] Australasian emergency medicine physicians,[11] Danish GPs[12]), the aim of the present study was to generate systematic data to inform understanding of comparative CPD preferences of hospital doctors across several clinical specialties.

Methods

A cross-sectional, quantitative, questionnaire-based study design was employed. This study involved all consultant and non-consultant level hospital doctors (NCHDs) currently working in Irish hospitals. A mixed-mode (online, paper) data collection procedure was used. Contact details for consultants and NCHDs were obtained from the Irish Medical Directory Database and via administrative staff at Ireland's major teaching hospitals. A random sample of 1,000 doctors were selected and contacted to participate in this study. Questionnaire data was collected between February and November 2015. In total, 547 doctors completed the questionnaires, providing a response rate of 54.7%. Ethical approval for this study was granted from the Clinical Research Ethics Committee (CREC) of the Cork Teaching Hospitals in December 2014.

A single survey was designed, consisting of the following five sections (see supplementary file for questionnaire):

- **demographic factors and educational/employment background**
  Clinical specialties were described employing the following categories: medicine, diagnostic specialties (ie radiology, pathology), paediatrics, surgical specialties, obstetrics and gynaecology, and other (ie not stated).
- **training needs analysis**
  Respondents were asked to rate the perceived importance (on a scale of 1–7, where a score of 1 signifies 'very unimportant' and 7 indicates 'very important') and current performance standard (on a scale of 1–7, where a score of 1 signifies 'poor' and 7 indicates 'very well') for a list of 33 skills/activities. This list was based on a modified version of the Hennessy Hicks Training Needs Analysis Tool (HHTNAT),[13] an instrument developed for use with healthcare professionals. In line with the HHTNAT administration guidelines, seven of the existing 30 items were replaced, which does not compromise its validity and reliability.[13] These adaptations involved the addition of items focused on performing clinical/surgical procedures, interpretation of laboratory/radiology data, safe prescribing practice, stress management and leadership (Table 1).
- **courses and training**
  Provided with a list of 20 topics, doctors indicated whether they had previously completed a course in that area, while also giving a rating of perceived importance (1='very unimportant', 7='very important') for each topic.
- **course format and learning environment**
  All doctors were provided with a series of 17 statements focused on mode of CPD participation and delivery (eg online, blended learning, face-to-face), and were required to rate their agreement based on an 8-point scale (1=strongly disagree, 7=strongly agree, 8=don't know/unsure).
- **open-ended comments**
  Doctors were given the opportunity to add open-ended comments based on general opinions regarding CPD, and suggestions regarding areas that might be developed as future CPD topics/activities.

Data analysis

All quantitative data are summarised as percentages or mean values (± standard error of the mean, SEM), and are illustrated in Tables 1–3. Statistical analysis was carried out using IBM SPSS (v20; IBM SPSS, Armonk, NY). For open-ended question data (section 5), content analysis was used to identify and code emergent themes. Two authors (AF and COT) independently reviewed the responses for each of the open-ended questionnaire items, coding all comments and developing an initial thematic framework. Constant comparisons methods were used to ensure that thematic categories were exhaustive and mutually exclusive.

Results

The sample was 60.3% male (n=330) with an average age (± SEM) of 47.3 (± 0.5) years. With respect to employment status, the response distribution was as follows: public hospital consultant (66.7%, n=365), private hospital consultant (13.0%, n=71), other hospital consultant (2.4%, n=13), NCHD (15.4%, n=84) and not stated (2.5%, n=14). In relation to clinical specialty, the following pattern was observed: medicine (56.1%, n=307), diagnostic specialties (9.1%, n=50), paediatrics (6.9%, n=38), surgery (15.4%, n=84), obstetrics and gynaecology (5.7%, n=31), other (4.8%, n=26) and not stated (2.0%, n=11). Of those who responded to the survey, 90.3% (n=494) were of Irish nationality and the remaining doctors were from the UK (2.9%, n=16), another EU country (2.9%, n=16) and non-EU countries (2.7%, n=15). With respect to place of postgraduate training, the distribution was as follows: Ireland only (25.8%, n=141), Ireland and UK (25.4%, n=139), Ireland and USA (14.3%, n=78), Ireland and Australia/New Zealand (7.7%, n=42), and other (23.2%, n=127).

Training needs

Table 1 summarises mean (± SEM) perceived importance and current performance ratings, across all clinical specialty categories, for each of the 33 GP skills/activities, as well as spearman's correlation coefficient test results, which demonstrate the strength of association between both ratings.

The five skills rated as most important were 'good record keeping/data input', 'communicating well with patients', 'working with a member of a team', 'getting on with your colleagues/team' and 'organising and managing your time and workload'. The five skills that received the highest current performance ratings were 'getting on with your colleagues/team', 'communicating well with patients', 'giving clear advice/information/instructions to patients', 'safe and evidence-based prescribing' and 'planning and organising individual patient care'. Correlational analyses revealed no association between importance and current performance ratings for 'organising and managing your time and workload' (r_s=0.08). Additionally, a weak positive correlation was observed between importance and current performance ratings for 'stress management (self)' (r_s=0.13). These findings signify areas where there is a relative, perceived skills deficiency.

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Table 1. Mean (±SEM) ratings for 33 GP skills/activities in Irish hospital doctors (n=547)

Skills	Mean (±SEM) importance ratings						Mean (±SEM) current performance ratings					
	Medicine	Diagnostic	Paediatrics	Surgery	O&G	Other	Medicine	Diagnostic	Paediatrics	Surgery	O&G	Other
Communicating well with patients	6.7 (0.1)	4.7 (0.4)#	7.0 (0.0)	6.9 (0.1)	7.0 (0.0)	6.9 (0.1)	5.8 (0.1)	5.8 (0.2)	6.0 (0.1)	6.0 (0.1)	6.5 (0.1)	5.9 (0.1)
Good record-keeping/data input	6.6 (0.1)	6.8 (0.1)	6.6 (0.2)	6.5 (0.1)	6.7 (0.2)	6.8 (0.1)	5.3 (0.1)	6.2 (0.1)*	5.6 (0.2)	5.2 (0.2)	5.6 (0.3)	5.4 (0.2)
Safe and evidence-based prescribing	6.4 (0.1)	3.8 (0.4)#	6.5 (0.2)	6.1 (0.2)	6.7 (0.1)	6.2 (0.3)	5.7 (0.1)	5.3 (0.3)	5.7 (0.2)	5.6 (0.1)	5.8 (0.2)	5.6 (0.3)
Appraising performance/ conducting audit	5.4 (0.1)	5.5 (0.2)	5.6 (0.2)	5.5 (0.1)	6.1 (0.2)	5.4 (0.4)	4.5 (0.1)	5.1 (0.2)	4.1 (0.2)	4.5 (0.2)	5.0 (0.3)	4.8 (0.4)
Getting on with your colleagues/ team	6.3 (0.1)	6.4 (0.2)	6.6 (0.1)	6.3 (0.1)	6.3 (0.2)	6.2 (0.2)	6.0 (0.1)	5.9 (0.2)	6.2 (0.2)	6.0 (0.1)	5.9 (0.3)	5.7 (0.2)
Statistical analysis of your own research data	4.4 (0.1)	4.3 (0.3)	5.3 (0.2)	4.6 (0.2)	4.9 (0.4)	4.9 (0.4)	3.8 (0.1)	3.8 (0.3)	3.2 (0.3)	3.6 (0.2)	4.2 (0.4)	4.0 (0.3)
Practising evidence-based medicine/clinical guidelines	6.0 (0.1)	6.1 (0.2)	6.4 (0.1)	5.9 (0.1)	6.5 (0.1)	6.0 (0.2)	5.4 (0.1)	5.5 (0.2)	5.3 (0.2)	5.3 (0.1)	5.8 (0.2)	5.4 (0.2)
Procedural skills	5.0 (0.1)	6.0 (0.2)	5.2 (0.3)	6.8 (0.1)*	6.9 (0.1)*	5.9 (0.3)	5.1 (0.1)#	5.9 (0.2)	5.6 (0.2)	6.1 (0.1)	6.4 (0.2)	5.7 (0.2)
Recognising and managing risk in clinical practice	6.3 (0.1)	6.3 (0.1)	6.3 (0.1)	6.3 (0.1)	6.6 (0.2)	6.4 (0.2)	5.5 (0.1)	5.5 (0.2)	5.2 (0.2)	5.5 (0.1)	5.9 (0.2)	5.4 (0.2)
Doing procedures/using new equipment/technology	4.3 (0.1)	5.8 (0.2)	5.4 (0.3)	5.6 (0.2)	5.6 (0.2)	5.5 (0.3)	4.4 (0.1)	5.6 (0.2)	5.1 (0.2)	5.0 (0.2)	5.7 (0.2)	4.9 (0.3)
Introducing new ideas/services/ clinics	5.6 (0.1)	5.9 (0.2)	6.1 (0.2)	5.5 (0.1)	5.8 (0.2)	5.7 (0.3)	4.8 (0.1)	5.0 (0.2)	4.8 (0.2)	4.7 (0.2)	5.1 (0.3)	5.1 (0.4)
Searching medical literature/ online healthcare resources	5.9 (0.1)	6.0 (0.2)	6.3 (0.1)	5.5 (0.2)	5.8 (0.2)	6.0 (0.3)	5.3 (0.1)	5.4 (0.2)	5.4 (0.2)	4.9 (0.2)	5.4 (0.3)	5.5 (0.3)
Giving feedback	5.7 (0.1)	5.6 (0.2)	6.2 (0.2)	5.2 (0.2)	5.7 (0.3)	5.5 (0.3)	4.8 (0.1)	5.0 (0.2)	5.0 (0.2)	4.5 (0.2)	4.4 (0.3)	4.6 (0.3)
Giving clear advice/information/ instructions to patients	6.4 (0.1)	4.6 (0.4)#	6.7 (0.2)	6.5 (0.1)	6.8 (0.1)	6.5 (0.2)	5.7 (0.1)	5.5 (0.2)	6.1 (0.1)	5.8 (0.1)	6.0 (0.2)	5.5 (0.2)
Negotiation and conflict resolution skills	5.9 (0.1)	5.4 (0.2)	6.2 (0.2)	5.6 (0.2)	6.0 (0.2)	6.2 (0.2)	5.1 (0.1)	4.6 (0.2)	4.6 (0.3)	4.8 (0.2)	4.8 (0.3)	5.1 (0.3)
Teaching/training colleagues, staff or students	6.0 (0.1)	6.2 (0.2)	6.3 (0.2)	6.0 (0.1)	6.6 (0.2)	6.1 (0.2)	5.3 (0.1)	5.5 (0.2)	5.6 (0.2)	5.3 (0.2)	6.0 (0.2)	5.5 (0.3)
Planning and organising individual patient care	6.0 (0.1)	4.7 (0.4)#	6.5 (0.1)	6.2 (0.1)	6.3 (0.2)	6.5 (0.2)	5.5 (0.1)	5.2 (0.3)	5.9 (0.2)	5.7 (0.2)	5.9 (0.2)	5.5 (0.3)
Assessing patients' psychological and social needs	5.4 (0.1)	3.3 (0.4)#	6.2 (0.2)	5.1 (0.2)	5.6 (0.2)	6.0 (0.3)	4.7 (0.1)	4.2 (0.3)†	5.0 (0.2)	4.2 (0.1)†	4.9 (0.3)	5.1 (0.4)

Table 1. ***(Continued)***

Skills	Mean (±SEM) importance ratings						Mean (±SEM) current performance ratings					
	Medicine	Diagnostic	Paediatrics	Surgery	O&G	Other	Medicine	Diagnostic	Paediatrics	Surgery	O&G	Other
Organising and managing your time and workload	6.3 (0.1)	6.4 (0.1)	6.4 (0.2)	6.2 (0.1)	6.4 (0.2)	6.5 (0.2)	4.7 (0.1)	5.0 (0.3)	4.2 (0.3)	4.3 (0.2)	4.6 (0.4)	4.7 (0.3)
Use of new media/digital technology	4.9 (0.1)	5.6 (0.2)	5.5 (0.2)	5.0 (0.2)	5.2 (0.2)	5.5 (0.3)	4.4 (0.1)	5.0 (0.2)	4.5 (0.2)	4.6 (0.2)	5.0 (0.3)	4.9 (0.4)
Writing medico-legal reports/legal medicine/medical ethics	4.2 (0.1)	4.3 (0.4)	4.7 (0.3)	4.2 (0.2)	4.3 (0.4)	4.5 (0.5)	4.2 (0.1)	5.0 (0.2)	4.1 (0.3)	4.1 (0.2)	4.3 (0.4)	4.8 (0.4)
Practising health promotion and preventative medicine	4.9 (0.1)	3.6 (0.4)[§]	5.7 (0.3)	4.3 (0.2)[§]	5.4 (0.3)	5.7 (0.4)	4.3 (0.1)	4.3 (0.3)	4.7 (0.2)	3.5 (0.2)*	4.6 (0.4)	4.4 (0.4)
Resource management/business skills/generating income/practice management	4.8 (0.1)	5.0 (0.3)	4.2 (0.4)	5.1 (0.2)	5.0 (0.3)	5.1 (0.4)	4.1 (0.1)	3.9 (0.3)	3.2 (0.3)	4.0 (0.2)	4.3 (0.4)	4.1 (0.4)
Writing and publishing your research	4.6 (0.1)	4.4 (0.2)	5.8 (0.2)	4.6 (0.2)	4.9 (0.3)	5.0 (0.3)	4.6 (0.1)	4.4 (0.3)	5.8 (0.2)	4.6 (0.2)	4.9 (0.3)	5.0 (0.3)
Designing, supervising, managing research projects	4.4 (0.1)	4.1 (0.3)[‡]	5.5 (0.2)	4.7 (0.2)	4.9 (0.3)	5.1 (0.3)	3.8 (0.1)	3.8 (0.3)	3.6 (0.4)	3.4 (0.2)	4.1 (0.5)	4.2 (0.4)
Accessing research resources, eg time, money (funding), information	4.1 (0.1)	3.5 (0.3)	5.5 (0.3)*	4.1 (0.2)	4.1 (0.4)	4.5 (0.4)	3.1 (0.1)	3.2 (0.3)	2.8 (0.3)	2.5 (0.2)	3.4 (0.4)	3.2 (0.4)
Working as a member of a team	6.4 (0.1)	6.5 (0.1)	6.7 (01)	6.2 (0.1)	6.3 (0.2)	6.8 (0.1)	5.8 (0.1)	6.1 (0.1)	6.2 (0.2)	5.8 (0.1)	5.6 (0.3)	5.9 (0.2)
Patient advocacy, social duty as a doctor	5.6 (0.1)	4.9 (0.3)	5.9 (0.3)	5.4 (0.2)	5.7 (0.2)	5.8 (0.4)	5.0 (0.1)	4.4 (0.3)	5.4 (0.2)	4.6 (0.2)	4.8 (0.4)	5.2 (0.3)
Communications with HSE/ regulatory agencies/professional bodies	5.0 (0.1)	4.6 (0.3)	5.3 (0.2)	4.6 (0.2)	4.9 (0.3)	5.0 (0.4)	4.3 (0.1)	4.5 (0.2)	4.1 (0.3)	3.7 (0.2)	4.2 (0.3)	4.1 (0.4)
Coping with and managing change in the healthcare service	5.4 (0.1)	5.3 (0.2)	5.7 (0.2)	5.2 (0.2)	5.4 (0.3)	5.5 (0.3)	4.6 (0.1)	4.5 (0.2)	4.4 (0.2)	4.3 (0.2)	4.6 (0.3)	4.4 (0.3)
Prescribing healthy lifestyle and weight management	5.0 (0.1)	3.0 (0.4)[#]	5.6 (0.3)	4.9 (0.2)	5.9 (0.3)	5.7 (0.4)	4.5 (0.1)	3.9 (0.3)	5.2 (0.3)	4.0 (0.2)	4.4 (0.4)	4.5 (0.3)
Stress management (self)	6.1 (0.1)	6.1 (0.2)	6.3 (0.2)	6.1 (0.1)	6.3 (0.2)	6.1 (0.4)	4.2 (0.1)	4.0 (0.3)	3.7 (0.3)	3.9 (0.2)	3.9 (0.4)	3.8 (0.4)
Leadership skills	6.2 (0.1)	5.8 (0.2)	6.6 (0.1)	6.3 (0.1)	5.9 (0.2)	6.3 (0.3)	5.1 (0.1)	4.9 (0.2)	5.1 (0.3)	5.1 (0.1)	4.9 (0.3)	5.2 (0.2)

Ratings were given on a 1–7 Likert scale, where a score of 1 signifies 'very unimportant' (Importance) or 'poor' (Current performance) and 7 indicates 'very important' or 'very well'.

Mann-Whitney U test comparisons, where $p<0.007$ (two-tailed) (Bonferroni correction): [#]decreased relative to other clinical specialties; *increased relative to other clinical specialties; †decreased relative to medicine, paediatrics, O&G and other; [§]decreased relative to paediatrics, O&G and other; [‡]decreased relative to paediatrics, surgery, O&G and other.

HSE = health service executive; O&G = obstetrics and gynaecology; SEM = standard error of the mean.

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Kruskal Wallis ANOVA comparisons of importance ratings based on clinical specialty indicated that the following skills were perceived as less important by diagnostic specialty doctors relative to other specialties:

- 'communicating well with patients' (X2=79.49, p<0.001)
- 'safe and evidence-based prescribing' (X2=55.83, p<0.001)
- 'giving clear advice/information/instructions to patients' (X2=21.78, p<0.001)
- 'planning and organising individual patient care' (X2=19.00, p<0.005)
- 'assessing patients' psychological and social needs' (X2=47.53, p<0.001)
- 'prescribing healthy lifestyle and weight management' (X2=44.43, p<0.001).

Paediatricians rated 'accessing research resources' as more important than other doctors (X2=24.79, p<0.001), and both surgical and obstetrics and gynaecology specialists rated 'procedural skills' more highly than other specialties (X2=70.21, p<0.001).

In relation to current performance, diagnostic specialty doctors provided higher and lower ratings relative to other specialties for 'good record keeping/data input' (X2=27.66, p<0.001) and 'assessing patients' psychological and social needs' (X2=12.10, p<0.05), respectively. Surgeons rated their performance for 'practising health promotion and preventative medicine' (X2=21.68, p<0.001) lower than other groups. Both diagnostic and surgical specialty groups rated their performance in 'assessing patients' psychological and social needs' (X2=12.10, p<0.05) lower than other specialties.

Courses and training

Table 2 provides a summary of percentage of respondents reporting completion of courses/training across 20 CPD topics, as well as mean rankings (± SEM), based on perceived importance. The majority of respondents had completed training/courses in the areas of 'medical education/assessment', 'CPR' and 'infection control', and almost 40% of doctors had completed training in 'quality improvement'. In contrast, fewer than 15% of doctors had completed training in areas related to psychological therapies ('cognitive behaviour therapy', 'behaviour change'), stress management ('resilience training') and areas that could be considered peripheral to daily clinical practice ('nutrition', 'disaster/refugee medicine', 'media training'). The five topics rated as most important were (in descending order): 'patient safety and medical error', 'infection control', 'CPR', 'medical education' and 'management skills'.

A significantly lower proportion of diagnostic specialty doctors had completed training in 'CPR' (X2=33.74, p<0.001). Paediatricians were more likely to have completed courses in 'nutrition' relative to all other groups (X2=27.85, p<0.005) and provided higher importance ratings for 'CPR' (X2=37.08, p<0.001) and 'nutrition' (X2=28.57, p<0.001) than all other groups. Paediatric doctors rated 'cognitive behavioural therapy' (U=293.50, Z=2.63, p<0.01) and 'behaviour change' (U=306, Z=2.45, p<0.05) as more important relative to diagnostic specialties. Surgical specialty doctors provided higher importance ratings for the topic 'human anatomy' relative to medical specialty doctors (U=2861.5, Z=6.43, p<0.001), diagnostic (U=696.5, Z=2.31, p<0.05), paediatric (U=383.0, Z=3.99, p<0.001) and obstetrics and gynaecology (U=280.5, Z=3.23, p<0.001).

Course format and learning environment

Table 3 provides a summary of agreement ratings for mode of CPD delivery and scheduling preferences. With respect to CPD source, respondents rated international meetings (mean agreement rating=4.5, based on a 7-point agreement scale) and national scientific conferences/meetings (mean agreement rating=4.1) as the most dominant CPD source, and the majority of respondents completed their CPD primarily in their specialist area. Interestingly, respondents were equivocal regarding the value of completing CPD in areas outside their clinical specialty (mean agreement rating=4.0) and the incentive value of completing courses that lead to formal professional qualifications (mean agreement rating=4.0). In contrast, there was greater preference for CPD options that might improve skills/knowledge but that would not lead to a postgraduate qualification. With respect to CPD delivery format, there was little appetite demonstrated for online-only courses (mean agreement rating=2.6), with greater enthusiasm shown for face-to-face courses (mean agreement rating=4.1) and hands-on practical sessions (mean agreement rating=4.9).

Analysis of open-ended comments

A total of 128 doctors returned open-ended comments regarding 'general perceptions of CPD'. The following three themes emerged:

- Barriers to access were cited by 28% (n=36) of open-ended item responders; time pressure (16%, n=20), funding (9%, n=12) and location of CPD opportunity relative to clinical site (4%, n=5) were cited as the most significant barriers to CPD completion.
  Sample response:
  We need protected time for CPD as due to workload/workforce commitments it is difficult if not impossible to attend courses for CPD.
- Positive or negative appraisal of value of CPD – 25% (n=32) of comments indicated approval (8%, n=11) or disapproval (17%, n=22) of CPD as an endeavour.
  Sample response:
  No benefit at all.
  It is essential for personal and professional development and for improved patient outcomes.
- Structure and organisation of CPD – 24% (n=31) of responders provided comments regarding the current structure/organisation of CPD in Ireland. 13% (n=17) suggested more customised CPD activities (eg based on clinical specialty), and 5% (n=6) provided broader comments regarding the need for better organisation of CPD (eg less bureaucracy).
  Sample response:
  Most faculty meetings now are too general to be useful as so much subspecialisation.
  Should be easier to record…

When asked to suggest future CPD offerings, 106 responses were returned; of these, 42% (n=45) suggested more non-clinical CPD options, focused on stress management and

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Table 2. Total percentage of respondents (across both sexes) reporting completion of courses/training across 20 CPD topics, as well as mean importance rankings (±SEM) for CPD topics

Skills	Mean ratings for importance of CPD topic and total percentage who have previously completed training in this area													
	Medicine		Diagnostic		Paediatrics		Surgery		O&G		Other			
	M (SEM)	%	M (SEM)	%	M (SEM)	%	M (SEM)	%	M (SEM)	%	M (SEM)	%	p(M)	p(%)
CPR	5.4 (0.1)	58	4.3 (0.4)	23#	6.6 (0.2)	87	4.6 (0.3)	53	5.6 (0.3)	62	4.9 (0.4)	70	0.000	0.000
Medical education/assessment	5.2 (0.1)	61	5.1 (0.3)	45	5.7 (0.2)	63	5.1 (0.2)	62	5.2 (0.2)	76	5.6 (0.3)	65	0.410	0.593
Health and safety in the workplace	4.2 (0.1)	31	4.5 (0.3)	40	4.6 (0.4)	43	3.9 (0.3)	31	4.5 (0.3)	19	4.0 (0.4)	35	0.269	0.813
Nutrition	3.8 (0.1)	9	2.9 (0.4)	5	5.2 (0.3)	33*	3.6 (0.3)	7	4.1 (0.3)	0	4.6 (0.3)	5	0.000	0.002
Quality improvement	5.1 (0.1)	37	5.4 (0.3)	51	5.2 (0.3)	53	4.7 (0.2)	22	4.9 (0.3)	29	5.2 (0.4)	50	0.153	0.076
Developing services and effecting change	5.1 (0.1)	33	5.0 (0.3)	23	5.4 (0.2)	24	4.7 (0.2)	23	5.0 (0.3)	19	5.4 (0.3)	37	0.432	0.758
Management skills	5.3 (0.1)	36	5.0 (0.3)	28	5.6 (0.2)	41	5.0 (0.2)	41	5.2 (0.3)	38	5.4 (0.3)	35	0.451	0.966
Infection control	5.3 (0.1)	54	4.8 (0.3)	46	5.7 (0.3)	62	5.3 (0.2)	47	5.2 (0.3)	43	5.3 (0.3)	60	0.283	0.866
Coaching and mentoring	5.0 (0.1)	29	4.7 (0.3)	24	5.4 (0.2)	35	4.8 (0.2)	37	4.9 (0.4)	33	5.2 (0.4)	40	0.570	0.940
Patient safety and medical error	5.8 (0.1)	38	5.4 (0.3)	32	6.0 (0.2)	45	5.4 (0.2)	28	5.2 (0.2)	33	5.9 (0.3)	40	0.079	0.901
Media training	3.6 (0.1)	15	3.5 (0.4)	8	4.4 (0.3)	14	3.1 (0.2)	8	3.8 (0.4)	14	3.8 (0.4)	10	0.042	0.921
Presentation skills	4.9 (0.1)	22	4.6 (0.3)	8	5.4 (0.2)	21	4.7 (0.2)	28	4.9 (0.3)	10	5.2 (0.3)	15	0.285	0.421
Interviewer skills	4.7 (0.1)	28	4.2 (0.3)	18	5.2 (0.3)	24	4.4 (0.2)	22	4.3 (0.3)	14	5.1 (0.3)	50	0.036	0.349
Cognitive behaviour therapy	3.4 (0.1)	10	2.7 (0.3)	3	3.9 (0.4)*	14	2.9 (0.2)	3	3.3 (0.3)	5	4.2 (0.4)	10	0.006	0.706
Behaviour change	3.9 (0.1)	9	3.2 (0.3)	0	4.3 (0.3)*	3	3.1 (0.2)	3	3.7 (0.3)	5	4.8 (0.4)	9	0.001	0.309
Healthcare economics/resource management	4.5 (0.1)	18	4.3 (0.3)	16	3.9 (0.2)	3	4.1 (0.2)	15	4.7 (0.3)	14	4.8 (0.3)	20	0.141	0.847
Apps, technology and social media in medicine	4.3 (0.1)	13	3.8 (0.3)	16	4.5 (0.3)	21	3.9 (0.2)	13	4.4 (0.3)	10	4.4 (0.4)	20	0.243	0.968
Human anatomy	3.8 (0.1)	13	4.7 (0.3)	16	3.8 (0.4)	10	5.7 (0.2)†	37	4.3 (0.4)	14	5.3 (0.4)	10	0.000	0.017
Resilience training	4.2 (0.1)	13	4.0 (0.3)	3	4.6 (0.4)	14	3.6 (0.2)	3	4.4 (0.3)	10	4.7 (0.4)	10	0.095	0.555
Disaster/refugee medicine	3.3 (0.1)	5	2.5 (0.3)	0	4.0 (0.4)	4	2.8 (0.2)	8	3.3 (0.3)	5	3.4 (0.4)	0	0.017	0.800

A score of 1 signifies 'very unimportant' and 7 indicates 'very important'.

Mann-Whitney U test comparisons, where p<0.007 (two-tailed) (Bonferroni correction): #decreased relative to other clinical specialties; *increased relative to other clinical specialties; †increased relative to medicine, diagnostic, paediatrics, and O&G.

CPD = continuing professional development; CPR = cardiopulmonary resuscitation; M = mean; O&G = obstetrics and gynaecology; p(M) = p-value associated with mean importance ranking data; p(%) = p-value associated with percentage completion comparisons; SEM = standard error of the mean.

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Table 3. Mean (±SEM) agreement ratings as well as total percentage of agreement ratings for mode of CPD delivery

Statement	Total percentage of agreement ratings							
	1 Strongly disagree	2	3	4	5	6	7 Strongly agree	M (SEM)
Postgraduate professional bodies are the main source of my CPD	11	19	15	19	13	13	11	3.8 (0.1)
International meetings are the main source of my CPD	7	10	14	15	18	21	15	4.5 (0.1)
Pharmaceutical industry-sponsored meetings are an important provider of CPD	23	22	14	15	13	9	4	3.1 (0.1)
I frequently use online medical resources/journals	2	7	9	10	18	26	29	5.3 (0.1)
Scientific meetings/conferences in Ireland are the main source of my CPD	7	12	15	22	22	15	8	4.1 (0.1)
The majority of my CPD is in my specialist area	3	4	4	6	16	32	35	5.7 (0.1)
My preferred time for CPD is the weekend	29	23	11	15	8	8	6	3.0 (0.1)
I am interested in doing CPD in areas outside my specialty	9	16	15	17	19	15	9	4.0 (0.1)
I am interested in courses leading to a professional qualification	13	17	14	12	15	17	12	4.0 (1.0)
I am interested in courses to improve my skills and knowledge but which do not necessarily lead to a postgraduate qualification	2	6	7	17	24	24	20	5.1 (0.1)
I am interested in doing interdisciplinary courses	6	11	17	20	19	18	9	4.3 (0.1)
I have the technical skills to do online courses	2	2	6	11	16	29	34	5.6 (0.1)
I am confident using social network features, ie Twitter, Facebook, blogs, Wiki, Google Docs	12	17	15	14	11	13	19	4.1 (0.1)
I prefer blended learning courses (mostly online with one or two face-to-face meetings each year)	9	22	17	17	17	11	7	3.8 (0.1)
I prefer face-to-face courses with no online teaching	9	13	12	21	20	15	9	4.1 (0.1)
My preference is for totally online courses	27	35	12	12	7	3	5	2.6 (0.1)
My preferred course format is workshops/hands-on practical sessions	2	4	14	18	23	24	15	4.9 (0.1)

Ratings are given on a scale of 1–8, where 1 = strongly disagree and 7 = strongly agree. *Point 8 on the scale is excluded during calculation of mean and SEM.

CPD = continuing professional development; M = mean; SEM = standard error of the mean

resilience training, management skills, communication skills and conflict resolution and 7% (n=7) requested more CPD options relevant to their specific clinical specialty. 19% (n=19) of responders made recommendations regarding preferred mode of CPD delivery, where as 8% (n=8) requested more interdisciplinary activities, 7% (n=7) sought more practical skills workshops and 3% (n=3) were in favour of more online CPD opportunities.

Discussion

Main findings

In agreement with recent recommendations regarding CPD provision for healthcare providers,[14,15] these results demonstrate that CPD offerings must be relevant to the practising doctor in order for CPD to adequately address their educational needs. The qualitative data also suggest that practice-related gaps relevant to specific clinical specialties need to be considered when designing effective CPD programmes. It was demonstrated, particularly for doctors working in diagnostic specialties, that individual clinical specialties demonstrate unique CPD engagement profiles and show different perceptions of the importance of various CPD topics. Similarly, the finding that surgical and obstetrics and gynaecology specialty physicians demonstrated specific and unique CPD needs related to procedural skills, as well as the general preference across all specialties for hands-on practical skills development courses, demonstrates the need for programmes that support acquisition and maintenance of procedural skills. Workload/time organisation and stress management were identified as areas where a skills shortage existed and that might be the focus of future CPD offerings.

Findings in the context of other literature

Stress and burnout experienced by hospital doctors can have implications for patient care.[16,17] Various curricula and interventions have been developed to promote doctor wellbeing and resilience.[18,19] Previous studies of CPD preferences of GPs have suggested that CPD choices are motivated by topics that the GPs themselves believe will strengthen their resilience and capacity to prevent burnout.[12] In line with these findings, the current results identified stress management as a CPD area where further offerings would be welcome.

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In a study based on two national surveys of non-training grade doctors working in the NHS in Scotland, key CPD needs identified included further education and training in management and IT[20] – over 60% of respondents indicated that further training was needed in these areas. Similarly, in the current study, non-clinical CPD topics were cited as important areas for the development of CPD programmes. Research has suggested a shift across recent years in doctors' CPD preferences towards non-clinical topics contrasting with earlier CPD surveys conducted among hospital doctors that showed a greater preference for 'traditional' CPD topics centred on updating of clinical skills.[21] It has been noted that this shift in doctors' CPD needs reflects an expansion of their roles beyond clinical knowledge and skills to include interprofessional teamwork, administration and management.[3] The present study results do not support the contention that traditional CPD activities should be supplanted by courses focusing on non-medical competencies. Rather, these data suggest that classic CPD activities should be supplemented with offerings focused on these important new non-medical skills and competencies.

With respect to barriers and facilitators to CPD participation, lack of time and funding issues were cited as important factors, which is consistent with international data reported elsewhere.[2,12,20,22] Respondents strongly favoured provision of hands-on practical sessions and face-to-face CPD offerings. Conversely, the online-only CPD offering was generally not regarded as an attractive mode of delivery although the blended learning option was better received. In contrast with recent data,[2] these data would suggest a hesitancy among the current sample to consider technology as an effective vehicle for delivery of CPD programmes. While respondents expressed some reluctance to embrace e-learning approaches, it should be noted that this was not attributable to perceived lack of IT competence (ie 'technical skills', see Table 3). It has been suggested that easier bedside access to online knowledge/resources might facilitate a greater acceptance and uptake of online CPD programmes.[23] There was also a clear preference expressed for workshops and hands-on practical courses, which contrasts with the more traditional didactic classroom learning that tends to dominate CPD offerings.[4] Lastly, it is notable that doctors in the current study showed a reluctance to participate in CPD activities arranged by the pharmaceutical industry. This trend may reflect increasing concerns among doctors regarding transparency and potential conflicts of interest, particularly when it involves financial sponsorships for CPD activities.[24] These concerns highlight the need for further public funding for doctors' CPD.

Limitations

The present study response rate (54%) was typical for mixed-mode survey-based studies in health sciences research.[25] However, we were unable to determine whether the non-responders differed from the responders in relation to demographic data or CPD practice and preferences. Hence, the possibility that the present study sample is not fully representative of the Irish hospital doctor population cannot be excluded. Additionally, while participants were asked to rate CPD course content and skills based on perceived importance and current performance, they were not asked to rank these areas for relative importance, limiting conclusions regarding which of the selected CPD areas should be prioritised relative to other areas.

Conclusions

The present survey of current CPD participation and current/future CPD needs of hospital doctors in Ireland has demonstrated a particular demand for CPD programmes that focus on non-clinical topics, including resilience training and time management, ideally delivered via interactive, participative learning methods. Additionally, future CPD participation and future needs varied significantly depending on clinical specialty. These data suggest that planners of CPD programmes should consider the diverse individual needs and preferences of clinicians across clinical areas to facilitate more effective educational interventions. ■

Supplementary material

Additional supplementary material may be found in the online version of this article at www.clinmed.rcpjournal.org/:

S1 – Consultant/NCHD needs analysis questionnaire

Conflicts of interest

The authors have no conflicts of interest to declare.

Author contributions

All authors contributed extensively to this manuscript. BM, MH, CB, DB and CO'T contributed to the study design and methodology. BM and AF completed the data collection. CO'T, AF and DB completed the quantitative and qualitative analysis of the data. BM, DB and CO'T drafted the final manuscript and prepared tables. All authors approved the final version of the manuscript.

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