What is the evidence for assuring the continuing fitness to practise of Health and Care Professions Council registrants, based on its Continuing Professional Development and audit system?

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Executive Summary

The aim of this study was to answer the question '*What is the evidence for assuring the continuing fitness to practise of Health and Care Professions Council registrants, based on its Continuing Professional Development and audit system?'*

Specific research questions

1) What is the impact of the Health and Care Professions Council (HCPC) Council's Continuing Professional Development *(*CPD) standards and audit on registrants?

2) What do the HCPC and registrants perceive the benefits and disadvantages of this approach to be?

3) What can be identified from the literature, HCPC and registrants on the impact on practice, and risks that are being mitigated by the CPD standards and audits?

4) What improvements can be identified to enhance the existing system?

5) What are the estimated costs of the current system to the regulator, to employers and to registrants?

There were five work streams involved in this mixed methods approach:

1: A literature review of CPD and its links to quality improvement and patient benefit.

The literature review considered evidence that learning is transferred to practice, and identified barriers to learning transfer. So much needs to be in place to aid and sustain this transfer. Key factors are the motivation of the individual and the support of the organisation including managers and peers to both support and facilitate that change. An association was found between the number of hours of CPD and externally observed performance ratings, however, this was not sufficiently sensitive or specific to allow CPD to be used as a means of detecting poor performance. However, a remediation CPD programme improved Doctors' fitness to practise. Concerns expressed in the literature were the failure to link CPD activity with staff appraisal and Personal Development Plans. Lack of external monitoring of choice of CPD activity raised questions about its relevance to service delivery, and failure to link CPD to HR systems meant that Trusts did not know what had been accomplished through CPD thus limiting the spread of good practice.

2: Interviews with HCPC council members, employers, CPD assessors and registrants.

We conducted 44 interviews with members of the Health and Care Professions Council (HCPC) Council, employers, Continuing Professional Development *(*CPD) assessors, and registrants to explore views on the HCPC CPD and audit system and to identify sources of evidence linking the current HCPC system to changes in professional practice and to patient benefit.

We analysed the data using a framework approach and used the five HCPC Standards as the analytic framework, together with a theme on continuing fitness to practise and improvements. We found positive evidence to support Standards 1 to 4.

Standard 5 raised most of the concerns and these were related to anxiety about selection for audit, better awareness about what a good CPD profile looked like, the potential to fabricate a CPD profile, the lack of an external validation of practise, lack of employer support to complete audits and lack of feedback following audit.

3: Survey of registrants to identify potential benefits of CPD

We conducted an online survey inviting 11314 registrants to take part in an online survey. The HCPC distributed the invitation and notified us that 8000 registrants opened the email, yielding a response rate of 1208 (15%). It is possible that the remaining 3000 did not receive the email due to incorrect email addresses, firewalls, or declined on the basis of the email title only, this would yield a lower response rate of 11%. We identified that registrants were positive about Standards 1-4 and understandably less enthusiastic about the audit. Most CPD was not funded and audits were generally completed in the registrants' own time. All types of CPD activity was viewed as having benefits for patients; however, respondents did not see how the CPD and audit system could identify registrants who should be de-registered on the basis of not fulfilling continuing fitness to practice requirements. Registrants provided clear examples of CPD that had led to patient benefit. The survey findings triangulated well with the findings of the interviews.

4: Linkage of fitness to practise data with CPD data held with HCPC to identify potential markers for fitness to practise concerns.

This work stream was conducted in order to establish whether there were any significant differences in the CPD profiles of those with or without Fitness to Practise (FtP) concerns. Any differences detected between profiles could potentially serve as 'early warning signs' or

flags for registrants who may be at risk of poor practise or issues relating to lack of professionalism.

We identified 21 registrants who had had fitness to practise concerns raised in relation to them and had also been selected for CPD audit. Using a 2:1 matching algorithm we matched them to suitable controls. The variables used for matching were as follows: profession, world region of qualification, gender and age. We then examined these 63 CPD profiles.

The analysis uncovered virtually no quantitative differences between those referred for continuing fitness to practise concerns and a set of matched controls in terms of CPD profiles. This indicates that CPD activity and fitness to practise are probably not related, or the numbers of audited registrants with associated FtP concerns was too small to identify any such relationship.

5: What are the estimated costs of the current system to the regulator, to employers and to registrants?

The economic analysis identified that the running costs of the CPD and audit system to the HCPC organisation was 4.3 million, this was made up from £4.05 from each registrant (4.5% of the registration fee). The CPD costs to the employer (of protected time provided to staff) were approximately £929 per year. Registrants reported that on average employers paid less than half of most of the costs associated with their CPD activities (course fees etc.) and the shortfall was met by the registrants themselves.

The analysis on best return on investment, identified '*Formal education (e.g. higher education qualifications)*', '*Additional roles (e.g. mentor, coach, tutor, teacher, supervisor, assessor)*' also most costly and '*Additional roles (e.g. secondments, work shadowing, visiting other departments)'* as the most favourable activities from this perspective.

Conclusions

The HCPC CPD and audit system together with the self-declaration assessment form the basis of continuing fitness to practise for registrants. Both are currently entirely based on self-assessment. We have considered this alongside medical education research that shows self-assessment to be unreliable, particularly for those who are under performing. The HCPC system is operating in parallel with the employer appraisal system and we would suggest that these two systems are joined up, without repetition, but feed into each other thus ensuring real practice is part of assuring fitness to practice.

We found evidence to support the effectiveness of Standards 1-4. The registrants, assessors, employers, and council members believed the system helped to drive up standards and keep their skills up to date. Most of the limitations about the CPD and audit

system focused on the CPD audit. We have made a range of recommendations that have come from this research.

Recommendations

1. To review the HCPC continuing fitness to practise system with regard to joining up the HCPC system with existing parallel systems of staff appraisal. This would ensure congruency and increase the robustness of a system which is currently based entirely on self-assessment. We anticipate this would increase public confidence.

2. To further clarify, for the benefit of registrants, the primary aim of the HCPC CPD Standards is to drive up the quality of practice and not to identity poor performance.

3. To consider creating an online facility to enable registrants to log CPD activity and support an audit-ready philosophy.

4. HCPC should consider contacting employers when registrants are invited to be audited, and request that time be provided to ensure registrants have time to compile their CPD profile and continue to be registered.

5. To request that as a standard, all CPD profiles should be validated by a line manager or include third party evidence.

6. To limit the number of times a registrant can be asked for additional evidence to meet the HCPC CPD Standards.

7. Consider providing qualitative *feedforward* advice following audit submission.

8. HCPC should advise employers that an appropriate level of protected time should be provided within working hours.

9. HCPC should advise on the best use of protected CPD time to offer the best return on investment.

Further Research

- More research to focus on the best value CPD that produces benefits for the user.
- Consider adding regular survey feedback for audited registrants

- Examine the causal relationship between CPD activities and patient health outcomes
- Conduct an internal audit to accurately assess the costs of CPD.

- The Patient Public Involvement (PPI) group suggested research should be conducted on the reasons for voluntarily de-registration.

Acknowledgements

We would like to thank all of the participants, senior HCPC staff, Patient and Public Involvement Group and the advisory group for their support with this research project and our colleague Dr Wayne Medford with supporting edits of the final report.

Contents

1. Introduction

In 2008, the Health Professions Council (the name was subsequently changed to the Health and Care Professions Council when social workers in England were added to the list) considered the range of mechanisms for assuring continuing fitness to practise. The HCPC has defined *continuing fitness to practise* as an all-inclusive term describing '*all those steps taken by regulators, employers, health professionals and others which support the maintenance of fitness to practise beyond the point of initial registration*' (HCPC, 2009).

The HCPC assure continuing fitness to practise through pre-registration mechanisms, self-certification, CPD standards and audit, returners to practice, and fitness to practise procedures (HCPC, 2009). The CPD and audit system forms part of an overall *continuing fitness to practise* system, but cannot assure a registrant has maintained fitness to practise without also examining competences; as it forms only part of a continuing fitness to practise system. However, in the HCPC *Continuing Professional Development Audit* report, the HCPC state "The HCPC views the CPD standards and audits for registrants as a robust process for assuring 'continuing fitness to practise'. We favour this term to the word 'revalidation', as we believe it more accurately describes what our process is there to do. (HCPC, 2014).

The HCPC system to ensure registrants' continuing fitness to practise

In 2003, the HCPC required registrants to renew their registration every two years which mandated that registrants sign a professional declaration. The declaration involves the following:

> "*Registrants make a declaration that they have read and will comply with the standards of proficiency, conduct, performance and ethics and that they have read and will comply with the standards for CPD*." (HCPC, 2008, pg9)

In 2006 registrants were additionally required to undertake compulsory CPD as part of their registration. The HCPC define CPD as '*a range of learning activities through which health and care professionals maintain and develop throughout their career to ensure that they retain their capacity to practice safely, effectively and legally within their evolving scope of practice*', (HCPC, 2009)

The HCPC set standards that were outcome based stating: "*Registrants are required to undertake CPD, record their CPD, ensure that their CPD contributes to the quality of their*

practice and service delivery, and ensure that it will benefit service users" (HCPC, 2009, p10).

The five HCPC CPD Standards are:

1. Maintain a continuous, up-to-date and accurate record of their CPD activities;
2. Demonstrate that their CPD activities are a mixture of learning activities relevant to current or future practice;
3. Seek to ensure that their CPD has contributed to the quality of their practice and service delivery;
4. Seek to ensure that their CPD benefits the service user; and
5. Upon request, present a written profile (which must be their own work and supported by evidence) explaining how they have met the standards for CPD.

The fifth Standard represents an audit of the registrants CPD and checks that the registrants have met all of the CPD standards. This process of auditing CPD began in May 2008. Originally 5% of registrants were randomly selected for audit with this proportion subsequently reduced to 2.5% (HCPC, 2009).

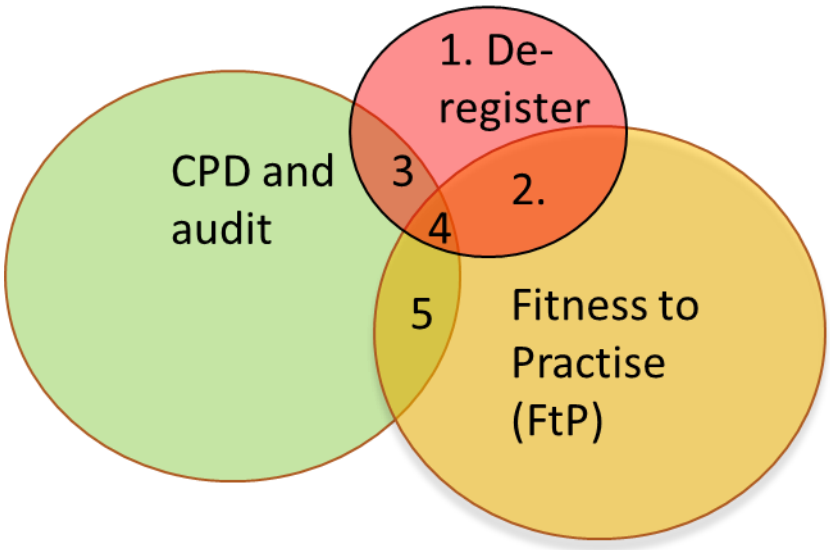
The HCPC CPD and audit system is seen as quality improvement (CPD) and quality control (audit) (ibid, Page 10). However, the HCPC acknowledge that the system is dependent on self-assessment (without external validation):

> *"Considering each of these processes in isolation, we could conclude that whilst they do contribute towards continuing fitness to practise, they do not represent a positive affirmation of fitness to practise in the sense of a regular or periodic, external assessment of each registrant against standards of conduct and competence at a given point in time. For example, the CPD and returners to practice processes have no direct or explicit link to standards of conduct or competence*." (ibid, page 11).

The fact that the HCPC system does not check registrants against standards of conduct or competence, and is based on a self-assessment process reflects an awareness by the HCPC that their registrants represent a low risk. However, the HCPC does recognise their registrants have a low risk in relation to competence but have a high risk of unprofessional conduct (HCPC, 2008).

In 2011-13 an analysis was conducted on the outcomes of the HCPC CPD and audit system (HCPC, 2014). The majority of the CPD profiles were accepted; however 7.7% (428) were de-registered. The majority de-registered themselves 7.5% (n=419) however a further 0.2% (n=9) were removed from the register by the HCPC following failure to meet the HCPC CPD standards (ibid, page 9). This fact demonstrates that one of the potential outcomes following CPD audit is to be deregistered for failure to meet the CPD and audit Standards. The following figure is an illustration to demonstrate options for deregistration from the HCPC.

Figure 1: A visual representation of potential de-registration outcomes from the CPD audit process and the fitness to practise hearings.



Key

1 = Voluntary de-registration

2 = De-registration following fitness to practise hearing

3 = De-registration following CPD and audit

4 = De-registration following CPD and audit and ftp hearing.

5 = Registrants who have been audited and were reviewed under fitness to practise (See work stream 4)

Most registrants successfully pass the audit; however, a very small minority of registrants do not meet the Standards and, as a result, their registration is withdrawn (HCPC, 2014). Removing registrants from the register following failure to meet the CPD Standards is not a stated aim of the process (HCPC, 2009); however, it is a potential outcome, and registrants are aware of this outcome if they fail to meet the required CPD Standards. The ability to detect registrants who fail to meet the CPD Standards and who are subsequently de-registered (outcome 3 above) infers a secondary purpose of the CPD and audit system is to de-register or remediate registrants who do not meet the CPD Standards.

Regulating Health and Care Professions

The work of healthcare regulators is vital in assuring that healthcare professionals are fit to practise and do not put the public at risk. Medical revalidation is part of this process, and the most important innovation to impact on professional licencing in medicine since the formation of the General Medical Council (GMC) in 1858. Internationally, it differs significantly from other approaches to health care revalidation e.g. Nursing Midwifery Council (2016) and HCPC (2009) and it is also arguably the most extensive. Revalidation can have several meanings but one definition is: '*the process by which all licensed doctors are required to demonstrate on a regular basis that they are up to date and fit to practise in their chosen fields and able to provide a good level of care*' (GMC, 2016).

The GMC approach to assuring continuing fitness to practise is relatively resource intensive, and therefore represents a major commitment of health care funding at a time when both cuts and re-organisations are taking place. In 2011 the *Enabling Excellence* paper reported that the Government (DH, 2011) retained an 'open mind' to extending revalidation to professions other than medicine, requesting firstly that evidence be provided on the added value to quality of care and patient safety.

The Professionals Standards Authority (PSA) (formerly the Council for Healthcare Regulatory Excellence) oversee the social and healthcare regulating bodies. The PSA (2012) stated in their report '*An Approach to Assuring Continuing Fitness to Practise Based on Right-touch Regulation Principles* (2012)' that they regard continuing fitness to practise as:

"*The primary role of continuing fitness to practise should be that of reaffirming that registrants continue to meet the regulator's core standards. Evidence considered in this report suggests that standards of conduct as well as competence should form the backbone of continuing fitness to practise requirements*" (PSA, 2012, pg. 1).

The Francis Report (The Francis Inquiry Report, 2013)[1] highlighted grave concerns about the professional practice of health care staff and made recommendations to improve practice for the benefit of patients. In comparison to the system now in place for doctors, the system to ensure the fitness to practise of all 16 professional groups regulated by the HCPC is reliant on a self-assessment form only for the majority of registrants (97.5%) and the remaining registrants need to show evidence of CPD (random sample of 2.5%).

[1] http://www.kingsfund.org.uk/projects/francis-inquiry-report

There is variation in the way that regulators approach the challenge of assuring continuing fitness to practise of its registrants. The PSA suggest that revalidation, which is one approach to continuing fitness to practise is at one end of a risk continuum with self-reported CPD at the other.

The General Medical Councils Revalidation System

The GMC revalidation system has been described as an expensive process to assure the continuing fitness to practise of doctors as it is resource intensive and requires all members to comply with the requirements (DH, 2011). Revalidation occurs every five years and is based on a yearly appraisal. The appraisal system includes the review of six types of supporting information that doctors are expected to provide and discuss at their appraisal at least once in each five year cycle. They are:

1. Continuing professional development (CPD)
2. Quality improvement activity
3. Significant events
4. Feedback from colleagues
5. Feedback from patients
6. Review of complaints and compliments

The GMC system of ensuring continuing fitness to practice is very much linked to collecting evidence about practice: both positive and negative and does not rely on self-assessment. The annual appraisal process feeds into the system that assures continuing fitness to practice, which is in contrast with the HCPC system.

The Nursing and Midwifery Council (NMC)

The NMC like the GMC use the term revalidation to ensure continuing fitness to practice, this is completed on a three yearly cycle. Registrants are required to provide the following evidence:

1. Maintain a record of practice hours
2. Maintain accurate and verifiable records of your CPD activities
3. Five pieces of practice related feedback (e.g. patient, colleague feedback)
4. Five written reflective accounts

5. A reflective discussion with a registered NMC nurse
6. Self-declaration of health and character
7. Evidence of professional indemnity
8. The form must be signed by a confirmer (line manager)

The registrant is required to provide the name of the employer and a confirmer to permit verification of the submitted information. The NMC system requires third party evidence and verification from a line manager. Like the GMC, the NMC systems is not based on self-assessment; it requires third party evidence and the documents need to be verified as true by a line manager or employer.

The importance of setting up revalidation for nurses was highlighted by the Francis Report (2013) which was developed and operational in 2016. The report outlined that the following should be put in place:

- The effective support and professional development for nurses should be made the responsibility of professionally accountable responsible officers for Nursing, and, in due course, reinforced by a system of revalidation.
- Nurses should be required to have an up-to-date annual learning portfolio showing up- to-date knowledge of nursing and demonstrating care, commitment and compassion.

This research

The justification for the current HCPC continuing fitness to practise system is that the sixteen professions regulated by HCPC are of lower risk to the public, therefore the requirements are based on right touch regulation principles (PSA, 2012). There is a clear need to understand more about the current HCPC system that seeks to assure the continuing fitness to practise of its registrants. This research project was commissioned by the Department of Health to provide evidence on the costs, outputs, outcomes, benefits and impact of the HCPC CPD and audit system.

2. Project Overview

Overall research question

What is the evidence for assuring the continuing fitness to practise of Health and Care Professions Council registrants, based on its Continuing Professional Development and audit system?

Specific research questions

1) What is the impact of the HCPC's CPD standards and audit on registrants?
2) What do the HCPC and registrants perceive the benefits and disadvantages of this approach to be?
3) What can be identified from the literature, HCPC and registrants on the risks that are being mitigated by the CPD standards and audits?
4) What improvements can be identified to enhance the existing system?
5) What are the estimated costs of the current system to the regulator, to employers and to registrants?

Five work streams

In order to comprehensively answer the research questions we designed the study using a mixed methods approach across five work streams:

Work stream 1 – literature review of CPD

The literature review considered evidence that learning is transferred to practice and identified barriers to learning transfer. Evidence was sought on the impact of CPD in healthcare settings and how this could benefit practice and patients.

Work stream 2 – Interviews with HCPC council members, employers, assessors and registrants

Telephone interviews were conducted with a range of stakeholders including HCPC council members, employers, assessors and registrants to collect rich qualitative data about the nuances of the HCPC CPD and audit process. The stakeholders represented many different occupational groups regulated by HCPC across the UK.

Work stream 3 – Survey of registrants into HCPC's CPD systems and processes

An online survey was devised to collect quantitative and qualitative data from registrants on a broader scale across the UK. The survey collected quantifiable data on the impact, benefits, weaknesses, and costs of the HCPC CPD and audit system. Free text boxes also gave the registrants an opportunity to provide examples of how CPD led to patient benefit.

Work stream 4 – Linkage of fitness to practise data with CPD data

A sample was identified consisting of those who had been both CPD audited and removed from the register for fitness to practise issues. The work stream sought to identify if there were red flags within CPD profiles which may indicate potential fitness to practise concerns.

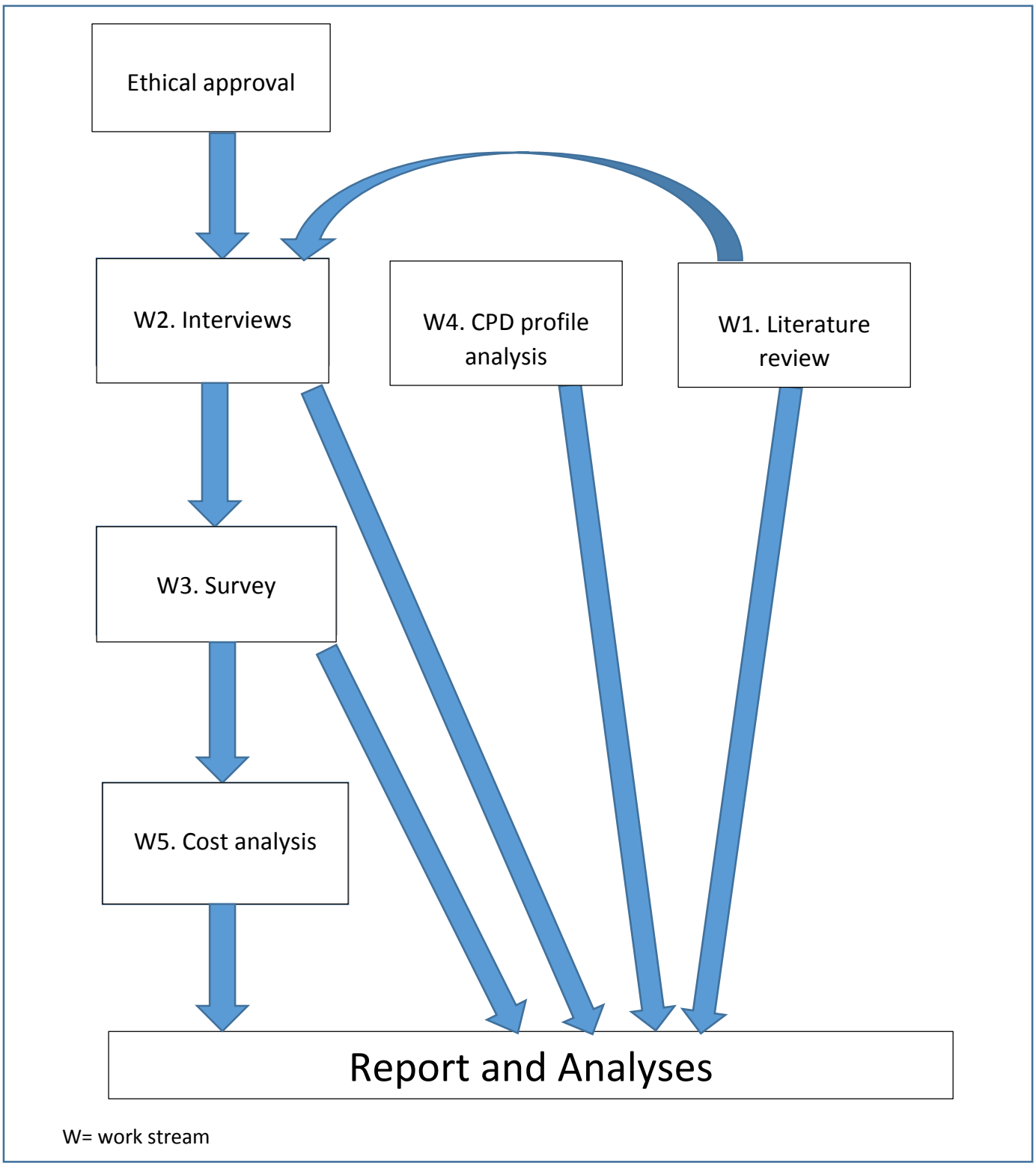
Work stream 5 – Examine the costs and resources currently required in the total process of assuring continuing fitness to practice

This work stream enabled the project to consider the tangible costs for registrants, employers and the HCPC involved with CPD and audit activities. Costs included monetary and time, as well as calculating cost benefit ratios for different CPD activities. The majority of the data for this work stream were provided via the data collected using the survey in work stream 3.

Study timeline

The work streams informed each other as the study progressed, as can be seen in the diagram below. The literature review helped to inform the context for the study and the findings. The survey design and cost analysis were informed by the interview findings. Linking fitness to practise data with CPD data was somewhat distinct from the other streams but helped to provide further information on the capability of the system. Collectively all of the work streams enabled a greater understanding of the processes involved to assure the continuing fitness to practise of registrants. The triangulation of data across different sources and perspectives provided a wealth of data collected in a short time span.

Study flowchart



W= work stream

Ethical approval

Ethical approval was granted by both Durham University, School of Medicine, Pharmacy and Health (May 2015) and Newcastle University, School of Medical Education (July 2015) Sub Ethics Committees.

Study advisory group

HCPC advisors

There have been several meetings face to face and via teleconference to discuss the project and collection of data with the Director of Policy and Standards (HCPC), Former Chair, (HCPC), Assistant Director (HCPC), Policy and Regulatory Development (GMC), and Senior Policy Director (DH). Meetings were held on the 26th November 2015 and 22nd January 2016 to feedback on progress and seek advice on next steps.

Patient and Public Involvement (PPI)

We have organised and conducted four workshops for the PPI group to help inform the study development, held in May 2015, December 2015, March 2016, and April 2016. The first meeting in May 2015 focused on the interview questions, the second meeting in December informed the survey questions. The third meeting in March provided the chance to feed back the findings and help to inform the interpretation and discussion. The April meeting focussed upon gleaning feedback upon the executive summary and initial recommendations. The members provided valuable input and feedback on the interview and survey questions; for example on the survey input included changes to the clarity of questions and more response options (e.g. employed by the council). The final meeting will feedback on the economic analysis and study recommendations.

The project greatly benefited from involvement from the public, patients, service users and carers. The team approached the existing regional NIHR research design service which has a membership of approximately 35, with a cross section of patients and carers varying in gender, age, disability. The group were emailed a summary of the proposed research project and their involvement in the project. Eight members of that larger group formed our PPI group to work with us to help inform the research. The meetings were held over four workshops which are outlined in more detail below:

Workshop 1: In the first half of this workshop the research group introduced themselves and gave a short PowerPoint presentation to briefly outline the study and the five work

streams involved in the project and outlined the four workshops where the PPI group would work with the research group The current HCPC fitness to practise system was also discussed as part of this discussion and the researchers showed some of the short films on the CPD and audit system on the HCPC website to provide some context to the research. Patients and carers were invited to participate by generating questions that ultimately fed into the interviews with participants. Some of the ideas generated did not lend themselves to interview questions but were fed into the survey questions. Following the first workshop meeting researchers drafted interview questions from the discussion that had taken place and the interview questions were emailed to participants of the workshop to check that it had reflected everyone's ideas. Participants were invited to feedback and questions were clarified.

Workshop 2: Researchers fed back on initial findings from the interviews. A draft survey and audit questionnaire was shared with participants. These included question areas which had emerged from workshop one and also from the interview findings. During the workshop we went through the questionnaire and discussed each question. New questions were generated, clarity of the questions, different stems for the questions and additional question responses options were added (e.g. employed by the council) as a result of going through the survey. The researchers edited the questionnaire and the PPI group were sent the electronic survey link prior to the survey going live to make any further suggestions and to help pilot the survey.

Workshop 3: A brief PowerPoint presentation was given by the researchers to re-cap what the research was aiming to achieve. This was followed by feedback on initial findings to date from the interviews, the CPD and fitness to practise databases and from the survey findings. The PPI group were invited to help interpret and discuss these findings. This discussion and interpretations were reflected in the write up of the interviews and fed into the discussion section of the report.

Workshop 4: Prior to the final workshop the PPI group were sent a draft copy of the executive summary and initial recommendations to comment on and feedback either via email or during the meeting. During the meeting the discussion and recommendations were discussed further. The PPI group agreed with the conclusions and recommendations. Any additional comments generated were reflected in the discussion, conclusion and recommendations of the report, for example, they suggested research should be done on those who voluntarily de-register to explore the reasons why they have done so.

At each workshop members were provided with refreshments, reimbursed for their travel expenses and offered a gift voucher incentive as an appreciation of their input and time. Members of the PPI group were presented with aggregated data only and were not given any access to raw or identifiable data collected.

Dissemination

Dissemination of findings was discussed and in addition to the presentation at the Department of Health the PPI group felt that the following places would be potential places to disseminate the findings of the research: Health watch, patient reference groups and noticeboards in hospital. The PPI group were also asked if two representatives from the group would be interested in attending a dissemination meeting at the Department of Health. All of the PPI group stated that they would be willing to attend a meeting at the DH depending on their availability.

This report

Overall, the study used a mixed methods approach and included five work streams that together answer the research questions. The methods and findings are contained within each respective work stream followed by discussion and recommendations

3. Work stream 1: Literature review of CPD

Background and Rationale

Due to the short timeframe of this study, a separate systematic review alongside the other work streams was not feasible. Rather than miss important findings we incorporated this work stream into a more extensive literature review which identified a large variety of education and training interventions across all healthcare professions (Education Outcomes Framework, funded by Department of Health). Papers relevant to CPD were selected for analysis in this work stream.

Literature search method

Pilot search

The search terms for this literature review were developed by reviewing several key papers, discussion within the research team and consultation with clinicians, academic experts and members of the advisory group. The search was further developed and refined with support from an information scientist at Durham University who helped to apply the search terms to electronic databases.

Three key concepts were developed:

1. Educational interventions (e.g. simulation training, supervision, work-based training, continuing professional development, assessment, appraisal)
2. Patient outcomes (e.g. length of stay, mortality, morbidity, duration of illness, complication rate, quality of care, patient benefit, patient experience, patient safety, quality of life)
3. Professional grouping (e.g. nurse, doctor, allied health professional, interdisciplinary, trainee).

Initial searches returned very large numbers of results due to the breadth of several key search terms (e.g. “training” and “intervention”). Following further consultation with the information scientist who had expertise in database searches; a more focused search was conducted in Embase using three key search criteria:

1. “education” (exploded) AND
2. (“patient outcome*” or “health outcome”) AND
3. “Health personnel” (exploded)

The focused search was designed to yield a higher proportion of studies which would be included in the review when assessed against our inclusion and exclusion criteria, but it did

not include the wide range of terms in the full search and was conducted on one key database (Embase). This pilot search returned 2190 citations.

Full papers were reviewed for a sample of 39 abstracts of which 20 were finally included. A data extraction sheet was developed, piloted and modified using these papers.

Another 22 papers were rated by all 14 members of the review team, to establish a common rating approach and assess the level of agreement between raters. Five papers were included by all raters. This process enabled the research team to check for the inclusion of key papers (identified from initial searches and consultation with experts), to test and develop the inclusion/exclusion criteria (to enhance calibration of coding across raters in the research team), and to refine the search terms in the main search.

Papers evaluated the impact of training in different ways, Impact is distinguished by different levels of evaluation using Kirkpatrick's hierarchy (Kirkpatrick and Kirkpatrick 2006, Chapter 3); 1) learner's reactions, 2) acquisition of knowledge, skills and attitudes, 3) changes in behaviour and 4) changes in practice. A key criterion for inclusion was that papers reported patient outcomes. We used a modified version of Kirkpatrick's hierarchy which has been developed to evaluate education and training in healthcare (Harden, 1999). This classification of educational outcomes makes the distinction at level four between change in practice (4a) and benefits to patients (4b) (Criteria for each level shown in Figure 2). For the EOF review only papers at level 4b were to be included. For this review level 3 and above were to be included.

Figure 2 Derived from an adaptation of Kirkpatrick's Hierarchy (Harden *et al.*,. 1999)

Level 1:
Participation – covers learners' views on the learning experience, its organisation, presentation, content, teaching methods, and aspects of the instructional organisation, materials, quality of instruction.

Level 2:
a) Modification of attitudes / perceptions – outcomes relate to changes in the reciprocal attitudes or perceptions between participant groups toward intervention / simulation.

b) Modification of knowledge / skills – for knowledge, this relates to the acquisition of concepts, procedures and principles; for skills this relates to the acquisition of thinking / problem-solving, psychomotor and social skills.

Level 3:

Behavioural change – documents the transfer of learning to the workplace or willingness of learners to apply new knowledge and skills. *Level 4:* *a) Change in organisational practice – wider changes in the organisational delivery of care, attributable to an educational programme.* *b) Benefits to patient / clients – any improvement in the health and well-being of patients / clients as a direct result of an educational programme.*

Abstracts of all 2190 citations were then reviewed and coded as 1 – '*include*', 2 – '*exclude*', 3 – '*background*', or 4 - '*follow up*' by the review team. Reasons given for excluding 1549 papers were categorised and coded. Codes for reasons for exclusion are shown in Table 1. Inclusion and exclusion codes and codes to categorise the reasons for exclusion were entered onto an Excel database.

Table 1 Reasons for excluding papers from pilot search

Exclusion criteria	**N**
1 = Not empirical research (e.g. superficial description, anecdote or commentary)	251 (16.2%)
2 = No education/behaviour change intervention	136 (8.8%)
3 = No evidence of patient outcome (i.e. Not Kirkpatrick Level 4b)	814 (52.5%)
4 = Not healthcare/social care setting or healthcare/social care staff	306 (19.8%)
5 = Other (please describe briefly)	42 (2.7%)
TOTAL	**1549**

There were 424 included abstracts. Of 123 abstracts coded as '3' or '4', 76 were coded as '3' - background reference offering potential theoretical explanations and 47 were coded '4' - for follow-up where inclusion criteria were not met but they indicated that results were reported in other publications. The remaining citations (n=94) were either duplicates or titles only. Anomalies with the search engine results were investigated as they arose.

Reliability

To examine the reliability of the ratings given to abstracts, ten per cent of the 2190 reviewed abstracts were randomly selected using the SPSS[2] *select cases* function. The 209 abstracts

[2] Statistical software package https://www.ibm.com/marketplace/cloud/statistical-analysis-and-reporting/us/en-us#product-header-top

selected were read by one person who coded them a second time and those initially coded by the first reviewer were read and coded by three other reviewers. Where there were discrepancies in the codes a brief explanation for the second coding decision was recorded and compared with the first raters' comments where they were available.

To simplify analysis codes 3 for *'background'*, and 4 for *'follow up'* were recoded as 2 *'exclude'* since they did not provide evidence for an educational intervention or patient outcomes. Reliability of ratings was estimated (in SPSS) using the KAPPA statistic for dichotomous variables. The results (Table 2) showed a moderate level of reliability (KAPPA = .47, Sig p <.000).

Table 2 Estimate of reliability of ratings

Second decision code * First decision code

		First decision code		Total
		1	2	
second decision code	1	27	22	49
	2	16	143	159
Total		43	165	208

Originally raters had been asked to include items where there was some uncertainty or where the paper seemed relevant but did not include the necessary patient outcomes. Differences in coding were discussed in a project meeting in order to standardise rater decisions. To improve inter-rater reliability only abstracts that described an educational intervention and reported patient outcomes related to the intervention were to be coded 1 – 'include', otherwise they were coded as 2 – 'exclude' and coded for the reason for exclusion (reasons 1 to 6 as in appendix 1: coding instructions). If they were of interest the relevant issues were to be described and the abstract given a sub code for 'background' or 'follow up'. Inclusion and exclusion criteria on the extraction forms and instructions were modified to reflect these decisions (Appendix 1: coding instructions). Check boxes on the extraction forms and Excel database fields were added to aid retrieval of papers that inform the five EOF domains and to indicate that a paper was relevant specifically to CPD (Appendix 2: Final version of the data extraction form).

The definition of CPD found on the HCPC website (See Figure 3) was circulated to reviewers to guide their coding decisions.

Figure 3 HCPC definition of CPD (http://www.hcpc-uk.org/registrants/cpd/)

> **'A range of learning activities through which health and care professionals maintain and develop throughout their career to ensure that they retain their capacity to practice safely, effectively and legally within their evolving scope of practice'.**

Main Search

Search Strategy

Following further consultation with the information scientist, a more comprehensive series of searches was conducted over five databases. These databases were selected to offer broad coverage of educational interventions with health and social care personnel. The databases included Embase, Social Services Abstracts, PsycINFO, CINAHL, and Social Care Online.

Search terms were generated following a review of several key papers and consultation with subject matter experts and selected members of the advisory group.

To minimise the inclusion of irrelevant citations, the search terms were grouped into three concepts:

- Education and related terms
- Patient outcomes and related terms
- Healthcare occupational groups and related groups

The complete set of search terms is available in Appendix 3.

For citations to be identified they needed to include a search term from all three search concepts (i.e. education AND patient outcomes AND healthcare /social care occupational groups). Results were limited to include papers published between 2004 and 2015 and only those published in English. Where database search limits allowed, the search was restricted to peer-reviewed papers with abstracts (excluding conferences).

Given the broad scope of the search terms, it was not feasible to run the full search across all databases. This was confirmed by test searches which generated a very high number of results (e.g. approximately 240,000). Again in consultation with the information scientist, the main search strategy involved two strands:

Full Search: All search terms from the three concepts were submitted to a key word search in Embase and Social Services Abstracts. These databases offer coverage of medical/nursing and social care journals and this approach ensures maximum sensitivity. The full search yielded 13,486 papers.

Focused Search: A more targeted search was conducted using PsycINFO, CINAHL and Social Care Online. Citations indexed with subject headers relevant to education (concept 1) and healthcare occupational groups (concept 3) were included, as well as those that also included a search term from the full list of search terms related to patient outcomes (concept 2). This approach targeted relevant citations more effectively, as several search terms in the full search were generic (e.g. supervision, user satisfaction) or had multiple meanings (e.g. orientation, degree, resident). Subject headers and Medical Subject Heading (MeSH) terms were exploded and relevant search terms were retained.

To ensure that relevant citations were not missed, full searches were also conducted in PsycINFO and CINAHL. A sample of citations were examined that were included in the full search results, but not the focused search results. No relevant citations were identified and we progressed with analysis of the focused search. The Educational Research Index of Citations (ERIC) was not included since on discussion with the librarian, it was felt that it would not return patient outcomes.

Search results

The pilot and main search identified 22054 citations (See Table 3).

Table 3 Number of results from main search per database

Database	Coverage	Type of search	Number of results
Embase (includes MEDLINE)	Includes 24 million indexed records in the field of biomedicine. Its specialist areas include psychiatry and pharmacology.	Full	12275
Social Services Abstracts	Includes bibliographic coverage of current research focused on social work, human services, and related areas, including social welfare, social policy, and community development.	Full	1211
PsycINFO	Includes nursing, psychology, medicine, sociology, pharmacology, physiology and linguistics.	Focused	678
CINAHL	Includes nursing, biomedicine, health sciences librarianship, alternative/complementary medicine, consumer health and 17 allied health disciplines. It contains more than 2.7 million records.	Focused	7440
Social Care Online	Contains research briefings, reports, legislation and government documents, journal articles, evidence-based practice, and websites relating to all aspects of social care.	Focused	450
Total		Full + focused	**22054**

Data management

Combination of pilot and main search

Search results were exported into EndNote v7. To create a master database, citations from the initial search (2190) and main search (22054) were combined in EndNote, resulting in a total of 24244 papers.

Duplicate removal

Using an automated function in EndNote, 1091 duplicate citations were deleted, and 23153 remained in the database.

Filtering by type of reference

The search focused on peer-reviewed journals, which typically publish higher quality studies. Article types which did not fulfil this criterion and were indexed as a letter, note, editorial, conference abstract/paper or conference review were excluded. Books, webpages and DVDs/CDROMS were also deleted. This resulted in the removal of 5199 citations, and 17954 remained in the database.

Additional duplicate removal

A manual search of matching titles identified a further 178 duplicates, which were deleted. A total of 17776 remained in the database.

Filtering by title

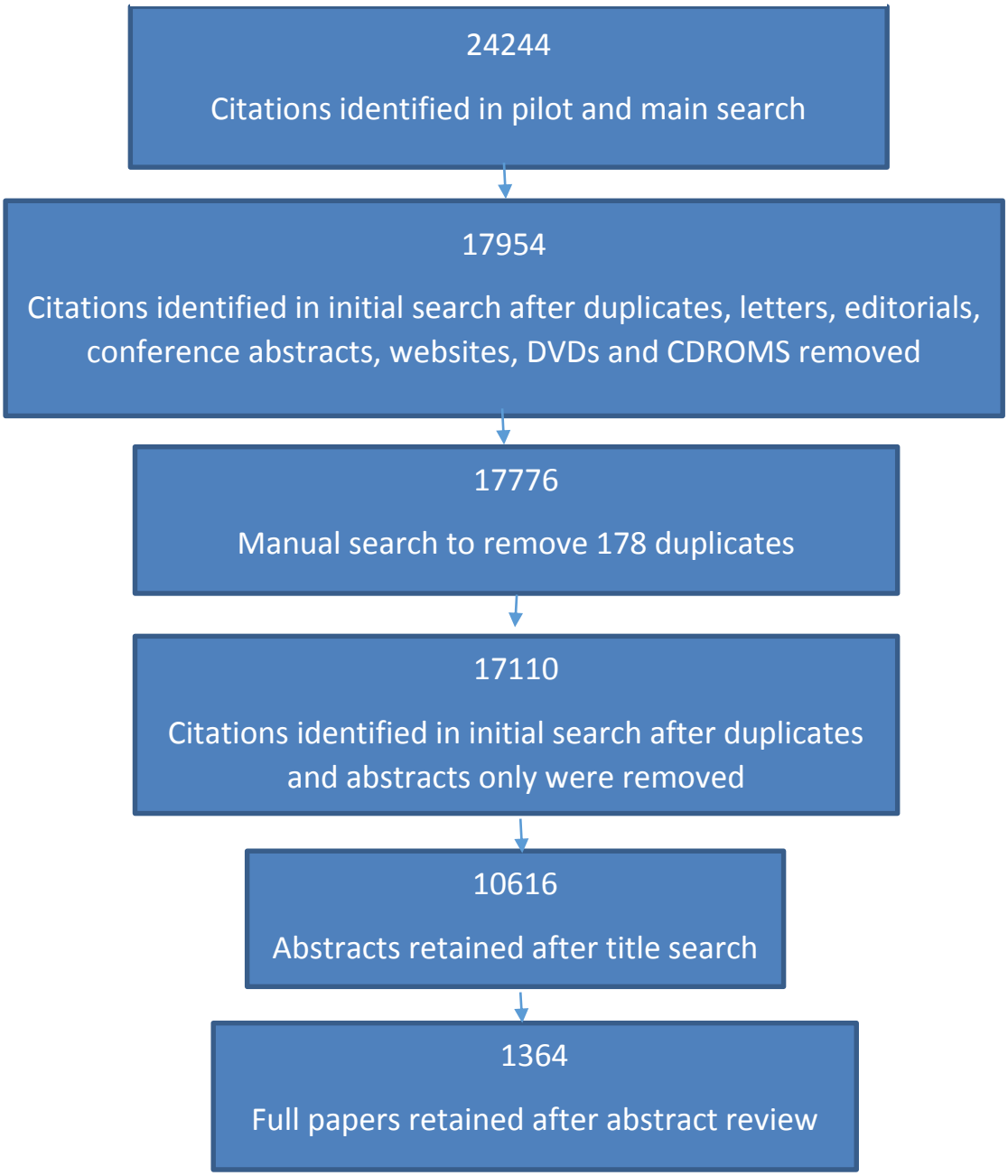
We read through 17110 titles to filter out clearly irrelevant papers (e.g. non-healthcare related). This figure is lower than the total of 17776 in the database as abstract reviews had already been conducted on the initial search. The total number of citations excluded by the title filter was 6494, and 10616 remained for the abstract review.

Filtering by abstract

10616 abstracts were read by a team of 14 reviewers and coded for inclusion (1) or exclusion (2). Excluded abstracts were coded for the reason they were excluded, and whether they should be considered for background information or follow up where authors have suggested that study results are reported elsewhere. The number of abstracts included for full paper review was 1364.

The combined results of the pilot and main literature searches are summarised in the flow chart (See Figure 4) and the reasons for exclusion are summarised (See Table 4).

Figure 4 Flow Chart of Papers included for full review



NB: These totals include papers identified in the pilot search.

Table 4 Reasons for excluding papers from the full search

Exclusion criteria	**N**
1 = Not empirical research (e.g. superficial description, anecdote or commentary)	1168 (13%)
2 = Single case study only	163 (<2%)
3 = No education or training intervention	4738 (51%)
4 = No evidence of patient outcome (KP Level 4b)	2610 (28%)
5 = Intervention not directed at healthcare/social care staff	334 (<4%)
6 = Other (please describe briefly)	25 (<1%)
No reason given	188 (2%)
TOTAL	**9226**

NB: This includes 2190 papers identified in the pilot search. Of those excluded, 180 papers have been retained because they provide useful background information, and 42 have been identified for follow up where authors indicate further publications will become available.

Full Paper Review

Of the 1364 papers included for full review approximately 1100 were downloaded and 260 requested through interlibrary loan using administrative support. These papers were reviewed by the team (about 100 per person). We originally intended to review a 10% sample of papers for quality control as recommended by Wong *et al.* (2010). However, with such a large team of reviewers it was considered expedient to implement a continuous quality assurance process. Team meetings were held at two weekly intervals at which reviewers brought papers to discuss and gain consensus on coding decisions and thus assure ongoing quality of the decision making across the team.

Identification of CPD papers

Reviewers were guided by the HCPC definition of CPD and applied similar inclusion and exclusion criteria (Table 5) to those being used for the larger EOF literature review to identify literature for the CPD review. Papers that evaluated training at Kirkpatrick level 3 (behaviour change) were excluded from the EOF review but coded as CPD.

Table 5 Inclusion and Exclusion criteria for papers included in the EOF literature search

Inclusion criteria	Exclusion criteria
CPD impact that is linked to positive professional change and/or to patient benefit	Not about CPD impact
Studies focused on healthcare or care staff	Not health or care staff
Kirkpatrick's level 3 or and 4	Not English language
Published within the last 10 years (to be reviewed and extended if required)	Not a scientific study (e.g. an opinion paper or commentary, letters)
	Studies that do not report on CPD impact
	Published outside the review period

However, applying the HCPC definition (Figure 3) to the included EOF papers would have led to the inclusion of most of the papers already being reviewed for the EOF study. The HCPC definition is deliberately inclusive of different forms and aims of learning, and most of the studies identified for EOF reported in-service, post qualification education or training. Additional criteria were needed to separate the main review from that for CPD.

Papers with 'continuing education' or 'continuing professional development' in the title or abstract, or awarded Continuing Medical Education Credits, or reported behaviour change following reflection on practice were marked as CPD. Fifteen papers were marked as CPD. Since so few papers had been identified in the EOF review, possibly because stricter Kirkpatrick level 4b criteria were applied in the abstract review, the original endnote database containing 17110 citations was searched using the terms 'continuing professional development' and 'continuing medical education'.

Selected papers were tabulated (Appendix 4) and the adapted Kirkpatrick Hierarchy (Figure 2) evaluation level was indicated in column 2 of the table. We were particularly interested in identifying CPD that led to a change in behaviour (Level 3), change in organisational practice (Level 4a) or to patient outcomes (Level 4b) but other papers were included as they provided additional information.

Methodological approach for the review

CPD meets criteria in the Medical Research Council (MRC) framework for complex interventions (MRC, 2008). Reasons for complexity are; outcomes may vary where a single learner may gather evidence in their portfolio for several different learning events with different outcomes,
different learners at the same event may report a variety of personal learning outcomes depending on their prior knowledge and experience, personal learning and practice change cannot be isolated from concurrent CPD activities of peers, and there are complex interactions between individuals ability to change practice and contextual factors such as organisational drivers, peer and local management support and the design and delivery of training (Kirwan and Birchall, 2006). The growth of CPD meets the MRC definition of a natural experiment where '*a relatively large population is affected by a substantial change in a well-understood environmental exposure, and where exposures and outcomes can be captured through routine data sources,'* (MRC, 2008).

However, CPD is not a well understood exposure since individuals, contexts vary and outcomes are difficult to capture. With such complexity it would not be sufficient to evaluate impact alone. Instead a theoretical understanding is needed to explain the circumstances in which CPD causes change.

We have grouped papers according to emergent themes or concepts and used a narrative approach to consider and inform models of transfer of learning into practice. A working model or theory can be used to understand and devise more effective CPD.

Literature Findings

Many of the papers reviewed for the Educational Outcomes Framework (EOF) study reported examples of post qualification Continuing Professional Development (CPD) or Continuing Medical Education (CME) and could have been included for this review. Following full review of 1364 papers and to avoid duplication with the EOF project, here we describe 15 papers that explicitly refer to CPD or CME in their title or abstract. Seven papers previously not included, using the stricter criteria for the EOF review, were identified by searching the endnote library containing 17110 citations (Bradley *et al.,* 2012; Gould, *et al.,* 2007;Barba and Fay, 2009; Gagliardi *et al.,* 2007; Goulet *et al.,* 2013, Wenghofer *et al.,* 2014 and Mathers *et al.,* 2012). All 22 papers specifically referred to CPD or Continuing Medical Education. We have indicated the Kirkpatrick level achieved (KP 1 to 4b) in the text

where appropriate. We have also described some papers included in the EOF review to assist in clarifying specific issues.

For this review we have synthesised the evidence to inform the following key issues that emerged from the literature:

1) What is the impact of CPD on practice and patient care?
2) Methodological issues concerning evaluation of impact of CPD
3) Can CPD prevent, identify or remediate poor practice?
4) Professional preferences for CPD
5) Barriers and facilitators to participation in CPD activities
6) A synthesis of the evidence to evaluate and inform models of transfer of learning into practice.

1) What is the impact of CPD on practice and patient care?

Eight papers including two literature reviews are described here. The single intervention studies all report evaluation at the adapted Kirkpatrick 4b level.

de Lourenzi Bonillha *et al.,* (2012) reported a significant rise in the use of prenatal tests (KP3) and improved communication skills leading to better detection of maternal diabetes (KP4b). This was attributed to a participative approach to learning, and the creation of a safe learning environment which facilitated honest and open reflection on current practice in the groups. It was also funded and backed by strong government drivers to implement new prenatal care guidelines. A continuing medical education programme about hypertension (Trogden *et al.,* 2011) found both Systolic and Diastolic BP were lower post intervention and in comparison with controls (KP4b). There was also evidence of changes in care (KP 3) with a higher number of provider visits and prescriptions post intervention and compared with controls. This intervention did not just attempt to raise awareness of hypertension and familiarise primary care providers with evidence based guidelines, it also aimed to set up a community network and build capacity in the speciality by encouraging providers to become specialists in hypertension. Cleland *et al.,* (2009) found that patients with neck pain had reduced disability (KP4b) and needed fewer home visits (KP 4a) when their physical therapists had not only attended a continuing education workshop, but had benefitted from follow up group sessions or outreach clinic visits from trainers. They argue for the need to follow up on training to enable new practice to become embedded. Cabana *et al.,* (2006) developed a programme which improved asthma care, communication, (KP 3) and reduced Emergency Department visits (KP 4b).The nationwide spread of this programme was limited

by a shortage of faculty with both clinical and educational expertise. The authors attribute the success of the programme to the willingness of faculty to become local champions of change and provide leadership in their own community. Continuing medical education credits were offered to improve take up of the educational programme with limited success (7% of those invited participated) and it was hoped that these 'early adopters' had the potential to become future champions of change.

Laprise *et al.,* (2009) developed a CME intervention for GPs in Quebec to identify and treat patients at risk of developing cardio vascular disease. Taking lessons from translational research, barriers to implementation of the training (lack of time, lack of systems, lack of reminders) were overcome by providing additional training to primary care nurses to carry out chart reviews using guidelines (KP 4a). The supported group identified and undertook preventative care for 78% more undermanaged patients (KP 4b) than the group given CME alone. A key recommendation is that CME providers need to address barriers to implementation of knowledge and build programmes that facilitate and sustain knowledge integration into practice. A common thread with these projects was that they had all developed ways to facilitate transfer of learning into practice and sustain learning beyond the original training programme.

In the papers coded as CPD described above, there are no examples of null effects in single projects, although there are such examples in the larger EOF review. However, published reviews of CPD have been less encouraging. A meta-analysis of the impact of Physician's Continuing Medical Education on knowledge, performance and patient outcomes (Mansouri and Lockyer, 2007) found a small to moderate effect (overall r .33). This effect was enhanced by moderator variables such as small interactive group work, attendance of a single discipline, and case based learning. The authors argue that learning in this context maintains relevance to practice and addresses specific learner needs. Disappointingly the effect size is negatively correlated with time to evaluation, with retention of new knowledge being most resilient to decay, but effect on performance and patient outcomes declining more steeply.

A systematic review of 81 trials of the impact on health care of educational meetings and workshops (Forsetlund *et al.,* 2009) questions the effectiveness of small interactive groups as suggested above. They found that a mixture of didactic and interactive education meetings was more effective than either didactic or interactive alone at improving the management of less complex behaviours and conditions with serious outcomes, but not for complex health behaviours which impact upon less serious outcomes. Effects were small. High attendance was also a significant effect, but this may have been related to the

popularity and relevance of the content to the health professionals rather than size of the group per se.

Mathers *et al.,* (2012) list a number of successful projects emerging from the implementation of CPD, but point out that the change cycle is often not completed, many Trusts don't know what CPD is occurring within their own organisation, and they do not measure its impact.

2) Methodological issues concerning evaluation of impact of CPD

We have described evidence that post qualification education and training can contribute to improved patient outcomes, especially where the delivery of a programme uses small group interactive methods and is augmented by organisational support, long term follow up training, networking and peer support. It is likely that the papers described here represent a publication or selection bias as the two reviews discussed tend to find that effects are small and short term. However, these conclusions should be treated cautiously as a number of publications address the difficulty of evaluating post qualification training and education and the self-directed learning model used to maintain a CPD portfolio for Mandatory Continuing Education (MCE).

Generally, for post qualification training and education, the level of evaluation, the primary outcomes, and the follow up time to evaluation limits conclusions that can be drawn. For example a systematic review of Teaching Critical Appraisal skills (Horsley *et al.,*. 2011) found only three papers that met their inclusion criteria; a journal club for medical interns, an internet based programme for surgeons, and a half day multidisciplinary workshop. None of these reported on process of care or patient outcomes, so evidence for impact at Kirkpatrick levels three and above is lacking. Similarly, Todd-Vaughan *et al.,* (2006) pointed out that continuing education programmes often only evaluated satisfaction with the programme (KP 1) or increased knowledge and skills (KP 2).

Measuring success may also depend upon the choice of primary outcome measure. In a well-designed randomised controlled trial of a distance learning programme, with feedback, undertaken by GPs (Wolters *et al.,* 2006), there were no changes in patient symptoms (KP 4b). However, a secondary finding was that the costs in the intervention group were significantly lower as a result of reduced referrals to specialist consultants (KP 3). The authors explained that GPs felt more confident about managing urinary tract infections (UTIs) after the distance learning, were more able to educate patients and thus did not need to make specialist referrals as often. In this case, lack of a primary patient outcome may have masked the significant impact on costs had they not also been measured.

A limitation of Wolters study was the short follow up time of only two months. Doctors reporting improvements anecdotally (Mathers *et al.,* 2012) felt it was 'too soon' to identify measureable outcomes particularly for rare or 'never' events. A paper included in the EOF review (Mitchell and Dale, 2015) describes a ten year follow up using the number of procedures since the last 'Serious Untoward Incident' (SUI) or 'Serious Learning Event' (SLE) to demonstrate the effectiveness of 'Human Factors' training for wrong site surgery. The authors compared post training incidents (No SUI or SLE since training in 2005 for 22,000 procedures) with those occurring pre-training (300 procedures before the next SUI or SLE) and during a pre-training period when a checklist was used (1500 procedures before the next SUI or SLE). This requires considerable long term commitment and leadership to maintain staff knowledge and behaviour change over ten years and shows the value of routinely collected data to evaluate impact.

Evaluating specific outcomes of training is challenging, as it rarely occurs in isolation, but often in the context of multiple interventions such as new policies, institution wide quality improvement initiatives or reorganisation, management change and staff turnover (See Kirkpatrick, 2006, Chapter 6). A USA study (Leonard *et al.,* 2006) found that a web based learning package with competency assessment designed to improve medication management in a paediatric tertiary care centre had less impact than changes in institutional policy. Whilst there was a significant reduction in medication error (KP 4b) the authors attribute their results to policy change rather than technology or education interventions. However, few quality improvement initiatives do not include staff training and it is almost impossible to isolate the active ingredients of such multifaceted integrated projects in order to correctly attribute an effect to training alone.

These issues of evaluation level; choice of primary outcome, time scale for follow up and contextual factors are compounded in compiling a self-directed learning portfolio for Mandatory Continuing Education (MCE) or revalidation. A UK study to assess the impact of continuing professional development (CPD) on doctors' performance and patient/service outcomes for the GMC (Mathers *et al.,* 2012) reiterated this complexity of establishing benefit for patients. Doctors reported changes in behaviour in practice, but they point out that impact on patients is difficult to attribute to their own CPD when others are also undertaking CPD. Barba *et al.,* (2009) provide 'anecdotal' descriptions of multiple small work-based projects undertaken as part of continuing education in gerontology by their post qualification nurses and their impact on patient care, often established by using routinely collected data. Evaluation of the impact of so many diverse small scale projects presents challenges as there is no available control group which is not also engaged in CPD. Change

in this context is made in small incremental steps, but single audits using routinely collected data can measure change over time (Mathers *et al.,* 2012).

3) Can CPD prevent, identify or remediate poor practice?

So far we have considered the impact of CPD in improving practice and patient benefit. Whilst the HCPC audit process of CPD does not explicitly aim to identify poor practice there are publications that state it assures the continuing fitness to practise of registrants and identifies those who do not meet the minimum standards. The audit process therefore arguably has a purpose which identifies, prevents, and remediates poor practice.

Goulet *et al.,* 2013 compared key performance indicators from professional inspection visits (record keeping, clinical investigations, accuracy of diagnosis, and appropriateness of treatment and follow up) for family physicians grouped by the amount of recorded CPD (>250 hours over 5 years, 50 hours per year, <10 hours). Factors associated with poorer practice were physicians' age, private practice and fewer hours of CPD. Physicians in private practice had less access to accredited relevant CPD activities, peer contact, and informal educational and networking activities that complimented more formal CPD. Although less recorded CPD activity was associated with poor practice, this would be a blunt instrument to identify poor practitioners, lacking sensitivity or specificity, as 34% of those with the least CPD were grouped with those with the highest ratings for clinical performance. In a similar study by Wenghofer *et al.,* 2014, physicians who participated in CPD were 2.5 times more likely to have a satisfactory assessment, particularly if their CPD involved group activities rather than self-directed or assessment based learning. Only 14 (10.4%) out of 135 who undertook no CPD were graded unsatisfactory, so again participation in CPD, whilst it is associated with satisfactory standards of practice, cannot be used as a means of identifying poor practitioners. In this study 94% of physicians received a satisfactory rating. Goulet *et al.* 2013 make the point that most physicians already practise at a high level and so there is a ceiling effect, in that improvements attributable to CPD activity are likely to be small. Also the causal direction is unclear. Are good physicians more diligent about completing their CPD, or does CPD make good physicians? If the former proposition is true then CPD may help to improve the practice of physicians who already practice to a satisfactory standard, but it is unlikely to prevent poor practice where CPD may be done ineffectively or not at all.

Closer to the HCPC model in the UK, 23 States in the US had implemented Mandatory Continuing Education (MCE) for licensure and re-licensure for nurses by 2002 (Underwood

et al., 2004). The primary difference compared with the UK model is the requirement to attend accredited training events to collect credits for MCE. It is assumed that attendance at a continuing education event will result in learning and improved practice (Todd Vaughan *et al.,* 2006). The UK model allows for learning to occur at any time in practice and without the need to attend a course, requires individuals to reflect on their learning, change their personal practice where appropriate, and evidence patient benefit. The aim of MCE in the US was to address the fall in knowledge and skills found after 10 years post-graduation through the development of skills for life-long learning, to maintain and update knowledge and skills, to provide an induction into new responsibility, to recapture mastery of concepts, and to enable staff to create, anticipate and respond to change (Todd-Vaughan *et al.,* 2006). For what has become an expensive educational reform, Todd-Vaughan *et al.,* (2006) found little evidence for an impact on patient care of Continuing Professional Units undertaken for licensure in the USA by physical therapists. Only one US State recorded a fall in disciplinary action related to sub-standard nursing practice following the introduction of MCE.

There is evidence that an intensive tailored remediation CPD programme can improve poor performance in doctors once they have been identified. Goulet *et al.,* (2007) describe remedial CPD where progress is scrutinised at weekly tutorial support sessions for 3 to 6 months. Statistically significant improvements for 51 physicians assessed before and after remediation were found in record keeping, clinical investigation, diagnostic accuracy, and patient treatment and follow up. However, this is not self-directed learning as the doctor must agree to externally set learning objectives and criteria for competence, and provide evidence to an external tutor that criteria have been met. One outcome was that seven physicians who chose not to participate were either struck off the register, retired, or did not practice in areas of medicine where their fitness to practice had been challenged.

These studies suggest that MCE has the potential to improve or maintain the practice of good practitioners, but it is not a vehicle to prevent or identify poor performance, although a modified form of CPD can help remediate poor practice.

4) Professional preferences for CPD

We have found some evidence that health professionals have specific preferences for CPD activities as these help to address needs pertinent to their discipline.

Gagliardi *et al.,* (2007) indicated that surgeons prefer to seek information from colleagues, rather than journals or databases. They describe inter-collegial CPD meetings held for

general surgeons from six community hospitals to present cases in order to resolve questions about treatment and care where there was some ambiguity about the best course of action. Case discussions were directly relevant to individual practice, allowed self-assessment by comparing group decisions with their own, provided access to a range of cases and information about relevant literature in a field that requires rapid assimilation of a broad knowledge base. Group consensus on decisions also gave surgeons confidence in their choice of treatment and care plan. It is not clear whether surgeons changed practice as a result of these meetings or if they were seeking confirmation of their original care decisions. Participants claimed patients were more satisfied with decisions, surgeons delivered more appropriate care and there was better continuity. One drawback is that group consensus does not always produce the correct answer and there is a need for informatics or expert input to inform discussion.

In a qualitative study of open responses from a survey, nurses expressed a preference for work-based learning (Gould, 2007), often finding class based course content was not sufficiently related to practice. Nurses complained about the lack of available work-based training. Transfer of class based learning to the workplace was dependent on good managers who helped bridge the gap between learning and practice. Barba and Fay (2009) addressed the transfer of class based learning to practice in their description of a blended learning gerontology education programme consisting of workshops and ongoing availability of web based resources. Learner assessment included a reflective learning journal, action plan for 3 to 6 months to integrate learning and practice, and a work-based quality improvement project that aimed to implement one best practice guideline and evaluate its impact. These separate work-based projects described a variety of outcomes including reductions in falls, improved nutrition and pain management.

In clinical psychology there is a strong experimental tradition requiring constant empirical evaluation of clinical approaches and comparison of results with published evidence to ‘benchmark’ performance. When different self-directed learning activities were factor analysed, factors appeared to support different constructs (Bradley *et al.,* 2012). Individual perceptions of professional competence were underpinned primarily by reading, although other CPD activities such as attending courses and conferences, and experience, contributed to the variance explained by this factor. Support was a key construct related to professional burn-out and involved activities such as networking, case discussion, and supervision. Bradley *et al.,* (ibid) discussed the contribution different CPD activities made to professionals perceptions of their practice, but did not address actual impact on practice or patients. On the contrary the authors added a caveat that individuals frequently are unable

to accurately estimate their own competence. This raises concerns about how individual choice of CPD activity addresses poor performance that is unrecognised by the learner.

Mather *et al.,* (2012) also raises concerns about the relevance of individual choice of CPD content to service delivery and organisational goals. The Royal College of General Practitioners (RCGP) has produced a tool for anonymous 'benchmarking' of knowledge and audit data allowing an individual to compare their own performance against their peers (Mathers *et al.,* 2012). This was regarded as a strong motivational instrument to implement change and provided real data to assess areas for improvement. In addition GPs gain points for completing the learning cycle by changing practice. Leadership of the RCGP has changed process and preference for the way CPD is done.

Preference for CPD activity may depend on the culture and requirements of the profession and the purpose of each activity (knowledge assimilation, work-based practice, competence or support) and, as in the case of GPs it depends on leadership of the profession, the development of resources and incentives to implement learning in practice. Learning is most likely to transfer into practice where it is relevant to needs of the discipline and, contrary to the drive for inter-professional education, single discipline training was often preferred by doctors and nurses. Indeed single discipline training was one of the significant moderator variables identified in Mansour and Lockyers' (2007) meta-analysis. However, GPs have expressed a preference for inter-professional learning as it reflected their practice environment better (Mathers *et al.,* 2012).

5) Barriers and facilitators to participating in CPD activities

Participation in CPD can be considered at four levels; the role of managers and peers, individual ability to undertake CPD, the design and delivery of CPD programmes, and the implementation of learning in practice.

Role of managers and peer support, and effect service demands on participation

Nurses commented on the role of managers in accessing CPD (Gould *et al.,* 2006). Access to CPD was inequitable, with part time, older, and night staff being given less opportunity to participate in CPD activities. Lack of backfill to replace staff in training, and high demand for popular courses limited access. There was a suggestion that managers regarded release for CPD as a reward and denial, a punishment, or that some managers felt threatened by staff gaining expertise they did not have. Other senior nurses felt unable to attend a course as they needed to fulfil management responsibilities. An advantage of nurses preference for work-based learning would be a reduction in time released from usual duties, but this was

difficult to access and time needed to carry out work-based projects, shadowing or seeking supervision can be seriously underestimated (Mathers *et al.*, 2012).

Line managers can play an important part in shaping CPD through identifying strengths and weaknesses in appraisals and goal setting in Personal Development Planning (PDP). Respondents to Gould's (2009) survey did not refer at all to a link between appraisal and CPD. In Mather's study (2012) the content of CPD is sometimes regarded as a matter of personal choice, with interviewees explicitly saying it has not been linked to appraisal or PDP. This seems to be a missed opportunity to develop areas of expertise, to address poor performance, and encourage CPD that is aligned to service needs. Lack of data capture also means that the impact of CPD goes unnoticed at an organisational level.

Managers and colleagues can influence workload and resources to facilitate participation in CPD. However, physicians found scheduling conflicts and a lack of support from colleagues prevented regular participation in CPD meetings (Gagliardi *et al.,* 2007) and limited the time needed to prepare and submit case presentations for group discussion. Other barriers for doctors in the UK (Mather *et al.,* 2012) were finding time to implement learning in practice and reflective space, or travelling to distant venues, cost of locum cover, and service demands which made it difficult to plan ahead often resulting in last minute cancellation of attendance at training. Patient safety training often depends on whole team attendance but synchronising individual diaries was a challenge.

Individual ability and motivation to learn

Individual ability to undertake CPD may be influenced by lack of skill, lack of access to resources, lack of time, other commitments all affecting motivation to learn. Once offered CPD, nurses found domestic commitments were a barrier to participation (Gould *et al.,* 2006), especially arranging child care where venues were some distance to travel. They were less willing to participate in CPD activities at certain times in their lives due to personal demands, but some felt pressurised to attend. There were problems accessing libraries and computers. There was resentment about the amount of personal time they were expected to invest. Despite this nurses were motivated to participate in CPD as part of their career development. Surprisingly, and contrary to the literature reviewed by the authors, no concerns were expressed about lack of study skills or need for academic support.

Staff need time and space to carry out work-based projects. Doctors have been discouraged by the complexity of leading practice change or quality improvement projects because they are so time consuming, involve so many meetings with different stakeholders and are under

resourced in terms of administrative and systems support. Also organisational resistance reduces motivation to transfer learning. Doctors also had little time or space to reflect and record learning about events experienced during the working day (Mathers *et al.,* 2012). High service demands prevented reflection on practice, the ideas often being forgotten during a busy day before being able to record them. Gagliardi *et al.,* (2007) questions the ability of doctors to self-reflect, a view repeated by a deanery spokesperson who commented on the paucity of reflection in the CPD of older doctors and doctors in difficulty (Mathers *et al.,* 2012). The interviewees in the study of Mathers *et al.,* (2012) made no mention of the use of models of productive reflection or a reflective cycle (e.g. Biggs, 1999 or Kolb, 1984), some implying that instead of being a cognitively demanding process, it could be done at an unconscious level. Reflection was perceived to be more productive when residents in the US were provided with guidance and a reflective tool using the metaphor of a mirror, and were also asked to consider the inter-professional social systems that support care delivery using the idea that it 'takes a village to raise a child' (Zegelstein and Fiebach. 2004).

Design and delivery of CPD programmes

The logistics of organising training and the expertise to design and deliver programmes emerge as a challenge. Gagliardi *et al.,* (2007) found the number of CPD meetings held was limited due to the time it took to organise them; scheduling them, booking venues, and organising a programme with no administrative support. Nurses in the study of Gould *et al.,* (2006) were frustrated when courses were cancelled because insufficient numbers had been recruited.

A number of studies favoured participatory, interactive approaches to learning (e.g. Barba *et al.,* 2007, Cabana *et al.,* 2006, de Lourenzi Bonillha *et al.,* 2012) and reviews (Mansour and Lockyer, 2007, Forsetlund *et al.,* 2012) advocate small group interactive learning. Good facilitation in health care requires both educational and clinical expertise. However, health care professionals are very resistant to developing group facilitation skills. In a process evaluation of a study included for the EOF review (Christie *et al.,* 2014), nurses inexperienced in facilitation skills tended to revert to more familiar didactic approaches.

Cabana *et al.,* (2006) could not recruit sufficient trainers to deliver a group based asthma care programme or develop post training networks, limiting the scope of the project. The logistics of delivering a programme are often under resourced and require detailed planning

including capacity building to sustain them. One study that addressed these issues was that of Barba and Fay (2009). In a well-resourced project they marshalled a considerable amount of administrative support to organise programmes and assist with collation of assessment and evaluation data. They also instituted a train the trainer programme to ensure availability of skilled faculty. Overall, however, Todd-Vaughan *et al.,* (2006) identified barriers accessing appropriate trainers with both clinical and educational expertise, organising learning groups that were the right size to facilitate small group learning, and accessibility in terms of time, cost and travel for staff.

Implementation of learning in practice

Todd-Vaughan *et al.,* (2006) argues that programme designs failed to consider bridging the gap between the course and returning to practice, with little evidence for post MCE communication or support from a mentor. In their review authors advocate post training use of e-mail networks or job shadowing to offer opportunities for supervised practice. The studies reporting impact on patients reviewed above have all considered the transfer of learning and post programme support, in particular Cleland *et al.,.* (2009) and Laprise *et al.,* (2009) who both found a significant effect of long term support compared with no support.

Barba and Fay (2009) built transfer of learning into their programme through action planning to enable integration of learning with practice. Key elements to implementation of learning were support of peers and work place managers. Hospital based mentors and administrators supported learners to focus and implement their projects to ensure they were relevant to practice and clearly aligned with organisational goals for improved service delivery. Good management can ensure that there are opportunities for supervised practice following participation in CPD. However, Mathers *et al.,* point out that doctors may undertake CPD but not have the opportunity to put it into practice straight away. This may apply to rare events or undergoing training in readiness for future responsibilities such as leadership.

Mathers *et al.,* also refer to a ‘tick box mentality’ which puts emphasis on collection of CPD points rather than the implementation of learning. Indeed comments refer to organisational resistance to new ideas and a risk averse culture that has a negative impact on an individual’s motivation to transfer learning into practice. Solutions are using the appraisal process and personal development planning to capture learning, and challenging organisational unwillingness to adopt new ideas by appointing an innovations lead or nurturing relations with trust management teams. Another approach is to strategically align CPD with organisational drivers and mandatory training. Recently in some Trusts, those

wishing to undertake CPD need to indicate how this is aligned to organisational objectives as well as personal development. Greater integration of CPD with Trust drivers for service delivery has led to strategic plans for the delivery of education and training. Leadership of the Royal Colleges and Deaneries has influenced implementation of learning by the development of learning resources, accreditation procedures to encourage practice change, funding to support individual learners who are expected to report how they have completed a learning cycle, and revalidation requirements.

6) Models of transfer of learning into practice

When organisations were asked about the impact of CPD, interviewees expressed a belief that it did change things but were hard pressed to think of examples and they generated a list of barriers and facilitators for change (Mathers *et al.,* 2012). A theory or model would help to explain how change occurs and how barriers and facilitators interact to bring about or prevent change. In the literature reviewed there is little consideration of models that would predict an impact on service delivery or patient outcomes. Where models or theories are mentioned they tend to refer to learning theory such as Knowles (1970) Adult Learning Theory (e.g. in Horsley *et al.,* 2011, Mather *et al.,* 2012) rather than theories of transfer of learning. Cabana *et al.,* (2006) make a reference to diffusion theory which describes the adoption and spread of new practice across organisations. This often relies on the characteristics of individuals and harnessing the drive of innovators and early adopters of change. Laprise *et al.,* (2009) designed their intervention using the PRECEDE-PROCEED model (Green and Kreuter, 2005) that aims to integrate learning and interventions in practice over time.

Underwood *et al.,* (2004) evaluated a model (Cervero, 1986) developed to address inconsistencies in findings about the impact of CPD on practice. The model describes four independent variables (Table 6); the characteristics of the educational programme, the individual profession, the proposed behaviour change, and the social system in which the profession operates. The model suggests that changes in practice can be explained by any single component.

Table 6 Model of Cervero (1986)

Concept	Components
Characteristics of the individual professional	Attitude towards professional practice Motivation toward change Receptiveness to new ideas

The CPD programme	Relevance to practice needs Clarity of programme objectives Faculty effectiveness Compatibility of learning and teaching styles
The proposed behaviour change	Desirability and ease of change Barriers
The social system in which the professional operates	Work climate Reward systems Peer attitudes

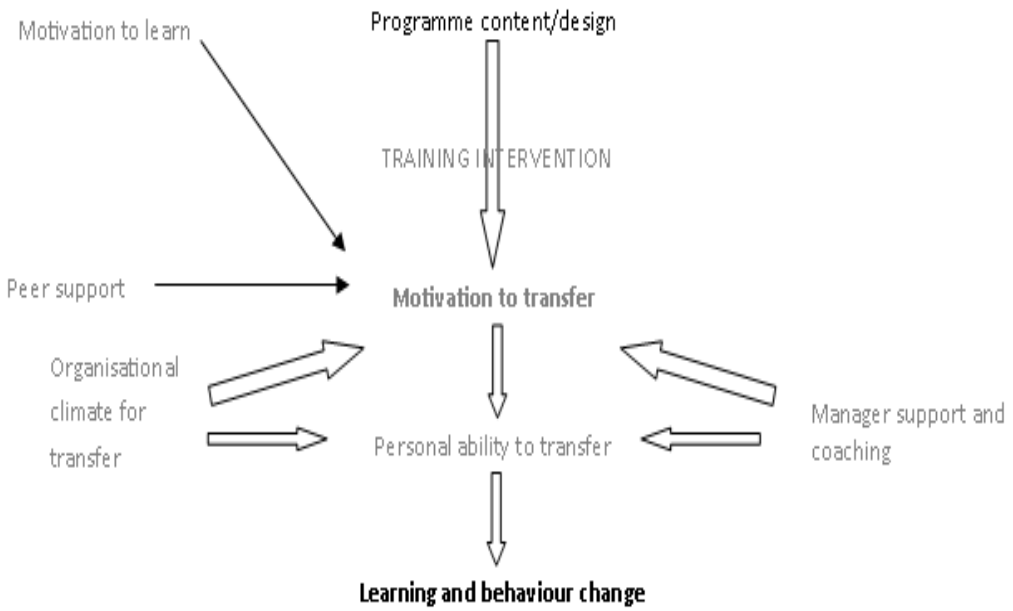
Underwood (2004) added 'impact' to Cervero's (1985) model when evaluating three Continuing Education Programmes. 'Impact' included increased quality of patient care and cost reduction. Their evaluation occurred at three time points up to six months after delivering the programme. There were low but significant correlations between concepts, but interactions were not examined. Results were limited by high attrition rates for the final evaluation time point. A qualitative evaluation of this model (Todd-Vaughn *et al.,* 2006) indicated a complex network of interactions between the formal educational programme, informal leadership networks, the administrative system, and the evaluation process itself. Crucially individuals who rated themselves high on innovation were those most likely to implement programme goals.

For learning to transfer into clinical practice Fox and Bennet (1998) identified three interconnected systems, self-directed learning, small group interaction, and organisational learning. Self-directed learning develops metacognitive skills that enables the learner to define personal learning needs and how strategies to meet these needs can be improved. Small group interaction is not explicitly described but alluded to as organisational learning using resources provided by co-workers and colleagues. Organisational learning is the sum of CPD activity transformed into organisational knowledge and made available in a climate that provides learning opportunities.

These models describe different elements associated with impact, but they do not provide a dynamic explanation of how they interact to achieve an impact. For the EOF project we searched business models of Transfer of Learning in an attempt to address gaps in the health professional education literature. An integrative review of training transfer (Burke and Hutchins, 2007) and models of transfer of learning into practice (e.g. Kirwan and Birchall 2006, Holton 1996) were reviewed. Holton incorporated concepts found in other work into a

complex model which has been simplified using factor analytic techniques by Kirwan (2009). This model (Figure 5) is simple and has been applied to evaluate training in the Irish NHS. The model allows analysis at multiple levels, and as such is divided into: the individual (the learner), the education/training intervention, the work environment including peer and manager support and the organisation. The arrows shown in Figure 5 indicate the strength of the association between concepts.

Figure 5 Learning Transfer model



Taken from C Kirwan, 2009 Improving Learning Transfer p21.

The model identifies *programme content and design* that is most suited to transfer of learning. Design is informed by needs analysis where trainers define the desired outcomes and the behaviour change that will bring this about. Potentially staff appraisal, benchmarking, audits or 360 feedback, and reflection could be used to identify areas of strength and weakness to provide Specific, Measurable, Achievable, Realistic and Timely (SMART) goals for PDP from which appropriate CPD activities can be identified. The programme content should be perceived as relevant to practice, such as case based discussion, or work-based learning and delivered well. Kirwan (2009) emphasises the use of educational theory and good facilitation. Learning distributed over time to allow opportunities to practice between sessions is recommended.

To enhance motivation to transfer, time should be set aside to prepare learners for return to the workplace through consideration of barriers, facilitators and through the creation of

action plans. The work climate has a strong influence on motivation to transfer. This includes recognition of the value of learning to the organisation, support from peers and managers, management of workloads to enhance opportunities to implement change, and positive workforce and organisation attitudes to change. Key to successful projects are the availability of resources to help fund and organise meetings, develop systems, and evaluate outcomes. These may be more available if CPD is negotiated around organisational policies and drivers for change.

Personal ability to transfer refers to how much time, energy and mental space learners can find to implement learning at work, an important factor raised by UK doctors (Mathers *et al.,* 2012). Personal ability is enhanced by a positive climate for change and the availability of work place support, coaching and supervision.

The central role of *motivation to transfer learning* and *personal ability to transfer* learning are pivotal and importantly at the level of the individual, where educational interventions tend to be aimed. Although other factors influence these two, without both of these being positive the transfer will not take place and there will not be a positive outcome.

This model is dynamic and explanatory, and fits the issues emerging from the literature review to explain both success and failure. However, there are two caveats. The impact of projects seems to be short lived (Manour and Lockyer, 2007). For change to be sustained there needs to be long term investment of time and effort at all levels of management to maintain learning and new behaviour, and systems should be in place to make it difficult to do the wrong thing. An excellent example of prolonged effort to maintain change, systems to prevent poor practice and a change in organisational culture through the engagement of senior management is provided by Cagioua *et al.,* (2012) who developed a trust wide programme to reduce IV infections. The reduction in IV infection rate has been maintained (personal communication March 2016) and other benefits have included a reduction in other hospital acquired infections and cost saving in procurement as a result of standardising practice and stakeholder engagement. The second caveat is that the model described above stops at the level of behaviour change. In needs analysis Kirkpatrick (2006) suggests consultation with senior managers to clarify SMART goals, then consultation with middle managers to identify the behaviours needed to achieve those goals, followed by designing an intervention aligned to the behaviour change that will achieve the goals. This link between behaviour and the desired patient outcomes should be supported by an evidence base. However, Todd Vaughan *et al.,* (2006) comment that 'a change in clinical performance does not automatically lead to a change in patient outcomes'.

Even where extensive interventions are directly aimed at those patients most likely to benefit, they often do not engage with the intervention, or patients report benefits that do not relate to the primary clinical outcome being measured (Christie *et al.,* 2014).

Finally it is worth mentioning that some highly effective CPD is not aiming to improve patient outcomes but instead may be directed at improvements behind the scenes in costs or administration, or to staff well-being, (although doctors omitted to mention this very important function of CPD in the study of Mathers *et al.,*. 2012).

Discussion

This review represents a very small number of papers originally identified for the Education Outcomes Framework (EOF review). The stricter search criteria used for the EOF project will have precluded papers that did not refer to patient outcomes and so papers reporting evaluation up to Kirkpatrick level 3 will not have been accessed and this may have limited the scope of this review. Since most of those selected for EOF were concerned with in-service post qualification training, many could have been included here. However, by selecting from these only papers with CPD or CME in the title or abstract we have identified a core of research which is directly relevant to the five HCPC standards and can inform the research question.

Few papers provided sufficient detail to conduct a realist synthesis as in the larger EOF review, so a narrative approach has been used to group topics into six key areas that emerged from the literature; the impact of CPD, methodological issues, driving up standards versus fitness to practice, professional preferences for CPD, barriers and facilitators to participation in CPD, and models of learning transfer.

1) *What is the impact of CPD on practice and patient care?*

We have provided examples of in-service training that has an impact on patient care. Where this has been accomplished, training has often been delivered to small groups using participatory, interactive and case based discussion (e.g. Cabana *et al.*, 2006; de Lourenzi Bonhillha *et al.,*, 2012; Gagliardi *et al.*, 2007) a mode of delivery that was associated with higher impact (Mansour and Lockyer, 2007) To integrate learning into practice education and training occurred in the context of organisational drive, leadership, and long term follow up and support (Barba and Fay 2009;. Cabana *et al.,* 2006; Cleland *et al.,* 2009; Laprise *et al.,* 2009; Mitchell and Dale, 2015; Trogden *et al.,* 2011). These conclusions may represent a publication bias for single intervention studies as reviews of CPD tend to find smaller and

diminishing effects over time (Forsetlund *et al.,* 2009; Mansouri and Lockyer, 2007). Nevertheless the single interventions are informative regarding how they achieved an impact on care.

2) *Methodological issues concerning evaluation of impact of CPD*

There are limitations in drawing conclusions about the impact of CPD from the published literature. These are the level of evaluation which often reports only level of satisfaction, or changes in knowledge, skills or attitude; stopping short of evaluating behaviour change, impact on the organisation or patient outcomes, and there was limited length of follow up time. Furthermore these are complex interventions taking place in the context of multiple small changes. These are difficult to evaluate when peers are also implementing CPD (Barba and Fay, 2009; Mathers *et al.,* 2112) and service delivery is constantly being affected by external factors, policy, or staff changes which may have a greater impact than the educational intervention of interest (Leonard *et al.,*, 2006). To evaluate impact it is important to use outcome measures that capture both primary and secondary outcomes which are often available in routinely collected data (Wolters *et al.,* 2006; Mathers *et al.,* 2012). However, poor knowledge management due to failure to link in with HR systems, may mean that best practice resulting from CPD is simply not recognised, limiting its uptake and spread across an organisation and thus its impact on patient care (Mathers *et al.*, 2012).

3) *Can CPD prevent, identify or remediate poor practice?*

In the USA CPD appears to have little effect in reducing disciplinary actions against health care professionals (Todd-Vaughan *et al.,* 2006). However, CPD is associated with high quality practice (Goulet *et al.,* 2013; Wenghofer *et al.,* 2014). This association could be explained by the tendency for high quality health professionals to be more diligent about completing CPD rather than CPD driving up performance. Conversely, there is also an association between poor performance and low levels of reported CPD, though this is a weak indicator of poor performance as 33% of well rated doctors in these studies recorded less than 10 hours of CPD. The quality of CPD rather than the number of hours recorded may be a more salient marker. CPD of doctors in difficulty is likely to be of poor quality showing an absence of reflection (Mathers *et al.,* 2012). There seems to be poor understanding of reflective models, such as those of Kolb (1984) or Biggs (1999), especially where doctors claim to be able to reflect unconsciously and without structured mental effort (Mathers *et al.,* 2012). It would suggest the need for reflective models to be taught in order to improve quality and complete the learning cycle.

4) *Professional preferences for CPD*

Whilst CPD content is a matter of personal choice there is some evidence that the demands of different disciplines are best served by specific forms of CPD. Thus doctors who needed to rapidly assimilate large amounts of information requiring high levels of judgement, find case based discussions informative and supportive of their treatment and care decisions (Gagliardi *et al.,* 2007). Organising and delivering the appropriate learning support though, is a challenge. In clinical psychology CPD is an opportunity to benchmark performance through data collection and reading, and to gain support through supervision (Bradley *et al.,* 2012). Nurses' preference for work-based learning is not well served, and there are limited opportunities for access to high quality relevant class based learning. Educational institutions need to analyse needs for nurses and adapt their mode of delivery to make learning more accessible and relevant to everyday practice to facilitate learning transfer (Gould, 2007).

Professional leadership can change the focus of CPD activity. Development of benchmarking tools by the RCGP and incentivising GPs by awarding CPD points for implementing learning into practice is likely to influence the choice of CPD activity that is relevant to service delivery.

5) *Barriers and facilitators to participation in CPD activities*

Four issues emerged; the role of management and peers to focus and support learning, the availability of appropriate learning opportunities, bridging the gap between learning and implementation, and enhancing individual ability to transfer learning into practice.

A general concern is that the failure to link CPD with appraisal and Personal Development Plans allows choice of CPD activity which may not be relevant to service delivery, cannot be implemented, or fails to complete the learning cycle that leads to change in practice. There is also a question about the ability of individuals to accurately assess their own performance to identify weakness that CPD could be designed to address through appraisal and Personnel Development Plan (PDP) (Bradley *et al.,* 2012 and Mathers, 2012).

Often CPD is seen as accessing formal education and training rather than informal learning activities, such as familiarisation with new policies or reading. Health professionals have complained that available courses are poor quality or not relevant to their practice, there is limited access to IT and library resources, and inequitable access to education or release

from clinical duties (Gould, 2007). Studies have reported a shortage of good facilitators with both an educational and clinical background often resorting to cascade training by including train the trainer components (Cabana *et al.,* 2006; Barba and Fay, 2009). However, some health care professionals find participatory models of facilitation a challenge to deliver, reverting to familiar but less effective didactic approaches (Christie *et al.,.* 2014).

Implementation of CPD is facilitated by supportive peers and managers open to learning from a colleague, creating a positive transfer climate (Barba and Fay, 2009). Linking training to organisational drivers and properly resourcing the expected changes in terms of time, reflective space, senior management and administrative support helps to complete the cycle of learning and plays a crucial role in motivating and enhancing an individual's ability to implement their learning into practice.

6) *A synthesis of the evidence to evaluate and inform models of transfer of learning into practice*

Published papers have referred to learning theory or theories of behaviour change (e.g. Horsley *et al.* 2011), and organisational theories about the adoption of new practice (e.g. Cabana *et al.,* 2006; Laprise *et al.,* 2009). We have reviewed models which integrate these aims into transfer of learning into practice (Cervero, 1986, Fox and Bennet, 1998, Holton, 1996, Kirwan, 2006). There are common strands: the characteristics of individual learners, the type of learning undertaken, and the social/organisational context and support. Thus learning and practice improvement should not be a discrete process but underpinned and given momentum by the quality of education, preparation to transfer, and the facilitation of senior and line managers, and peers. The barriers and facilitators to learning transfer described in the literature are well explained by business models (e.g. Kirwan, 2009).

Using the Kirwan model (2009) a starting point is to identify a clear focus and desired outcomes for CPD (i.e. problems to be addressed and performance indicators). Ideally personal learning objectives would be aligned to service improvement or organisational drivers. Training needs analysis should clarify what the individual needs to change (knowledge, skills, attitudes or behaviour), the kind of training which would meet these objectives and the support that would be needed to implement change (mentors, peers, management). This process would naturally sit within the context of appraisal and personal development planning. The intervention has not only to be relevant to practice but incorporate elements of a learning or change cycle that encourages individuals to negotiate, create and implement an action plan (e.g. Barba and Fay, 2009). Where the change is

valued and supported by managers and colleagues this enhances both an individual's motivation and ability to transfer. Support may take the shape of providing time and space to reflect and implement change, practical support such as mentoring, administrative or developing systems, and reducing resistance especially amongst more senior staff.

The current criticism of CPD is that it is not overseen, focussed or supported, so isolated learners are not motivated, and ability to change practice is constrained. Failure to link CPD to HR systems, means that outcomes are invisible to organisations and the impact remains unquantified and good practice is not spread across the organisation (Mathers *et al.,* 2012).

Implications for CPD audit

Only two papers reviewed originated in the UK (Gould et al, 2007 and Mathers et al, 2012) therefore there is little evidence published in peer reviewed journals about the impact of CPD in the UK. In Canada, whilst there is an association between CPD hours reported by doctors and measures of good clinical performance (Goulet et al, 2013, Wenghofer et al, 2014), the direction of this association is unclear. It seems that younger doctors working in locations with greater access to educational networks and peer support are more likely to complete more CPD of better quality. This may reflect a shift in educational culture or the learning environment rather than evidence that CPD is driving continued fitness to practise. Mathers et al (2012) suggest that despite the challenges many clinicians do try to implement learning from CPD especially where this is effectively driven by the Royal Colleges. However, UK nurses experience difficulties in accessing appropriate CPD, and poor line management may treat educational opportunities as a reward or punishment rather than a requirement of professional practise (Gould et al, 2007). Linking learning for continuing fitness to practice registration to appraisal and personal development plans would provide equitable support for staff. A link would also focus individuals by ensuring CPD activities were relevant to practice, identify current weakness or developmental learning needs, and include a learning contract to address these issues, thus making the CPD relevant to individual fitness to practise and verifiable by line managers. This would have the added advantage of improving data capture of quality improvement across organisations and evidencing the impact of CPD on improved practise.

Learning may reassure staff that they already have the knowledge and skills required for fitness to practice, however, the evidence also suggests that programme leads and line managers need to discuss how to reflect on current practise, how learning will be applied to practise, and how to evaluate improved performance. Lack of reflection is indicative of poor portfolios (Mathers et al, 2012) and good understanding of change management and local

supervision and support has led to implementation and effective evaluation of best practise (Barba and Fay, 2009).

Evidence that CPD standards and audit mitigate risk is not encouraging. In the USA the introduction of Mandatory Continuing Education for nurses did not change the number of disciplinary actions (Todd-Vaughan et al, 2006). The primary issue identified by Mathers (2012) was the failure to close the loop by linking CPD with HR systems. Line managers do not oversee reported learning, or evidence of implementation of learning into practice. A key risk in the current audit system is that staff deemed to be performing below standard by a line manager would still be reregistered by submitting a CPD portfolio that implied learning and compliance with current best practice standards

4. Work stream 2: Interviews with HCPC, employers and registrants

Background and rationale

This work stream investigated the experiences of a diverse range of participants who had experiences of being involved with the CPD and audit system in many different ways. We therefore conducted interviews with those who were key in developing and overseeing the current system (council members), those who assessed CPD portfolio's selected for audit (assessors), those who undertook CPD and had to meet the HCPC CPD standards (registrants) and those who managed the registrants in their day to day work (employers).

Method

Recruitment

The aim was to select interviewees using maximum variation, covering a wide range of issues, i.e. professional group, staff grade, NHS or private sector, age and gender. Originally we had planned to use focus groups to collect data but this was later changed to telephone interviews due to limited time and cost resources. The HCPC regulate registrants across a wide geographical area therefore given the constraints it was more feasible to conduct telephone interviews. The use of telephone interviews may have yielded better quality data to capture individuals' personal accounts of their CPD experiences compared to open discussions in focus groups. Participants were also able to be interviewed at a convenient time to them rather than in a scheduled group interview.

The recruitment procedure involved an invitation email sent to potential respondents to take part in the study by the HCPC or the research team. The invitation email included a participant information sheet explaining the research and that data will be confidential and anonymised. They were invited to register their interest via the researchers university email account. Once participants agreed to take part in a telephone interview (at a time convenient to them); a short filter e-questionnaire was sent to them asking for brief demographic information (such as profession, age, gender, length of time registered, have they been audited).

Contact details were obtained from HCPC for the following groups:

Council members:

The council members were contacted by the HCPC and asked if they would like to take part in the study (n=7). Seven council members (including current and previous members) agreed to take part. Email addresses were then passed to the researchers who sent them information about the study and consent forms. A convenient time was then arranged for a telephone interview for those council members who opted-in to be interviewed.

Employers:

An email was sent by HCPC to a list of employers (n=100) across all professions and settings who had previously attended HCPC workshops and training days inviting them to take part in an interview. If they were interested in being part of the study participants then contacted the researcher directly to arrange a convenient interview time.

Assessors:

Following a meeting with HCPC it was decided to interview an additional group (not in the original tender); assessor's (n=15). A list of assessors was provided by the HCPC. The researchers then contacted the employers about the study. A convenient time was then arranged for a telephone interview.

Registrants:

A random sample of 300 Registrants were identified by the HCPC (150 who had been audited and 150 who had not) across all professions and across all settings. Following two reminders, a third reminder was emailed to participants with an incentive (£10 gift voucher). However, only a small number of people offered to take part in an interview. Therefore a second sample of registrants (n=300, 150 audited, 150 non-audited) were provided by HCPC. The researchers emailed out an invite to interview and an information sheet. Participants were invited to contact the researcher directly to arrange a convenient time for a telephone interview.

An information sheet and consent form was sent to all participants. In addition to written consent, verbal consent was also taken at the beginning of the interview.

Data collection

Interviews focussed on experiences of the system, to identify strengths, potential weaknesses and risks in relation to continuing fitness to practise; the type and amount of CPD undertaken pre and post- introduction of HCPC CPD requirements, and time taken to

complete the audit. Questions on added value such as changes in professional practice and patient benefit were also explored. (See appendix 5 for interview schedules)

Interview schedules were drafted and revised at several project team meetings. With advice from HCPC and the PPI group who also contributed to the development of the interview schedule. Questions included exploring strengths, weaknesses and impact of the HCPC CPD and audit system.

We anticipated data saturation to occur after thirty interviews (Mason, 2010). However forty-four respondents were interviewed to ensure all themes were fully explored.

Analysis

The interviews were recorded with the participants' permission and transcribed verbatim. The transcripts were coded qualitatively using a framework approach. (Ritchie & Spencer 1994)

The stages of the analysis involved:

- *Familiarisation* - gaining an overall view of the data that had been collected. This involved reading the transcript data and noting the range, depth and diversity in the data collected. Meetings between three researchers engaged in the same process enabled discussion of the concepts and themes that emerged from the data.
- *Identifying a thematic framework* - identifying the key issues, concepts or themes by which the data could be examined and sorted. The construction of the framework drew upon:
    - *a priori issues - those issues that guided the study aims and were developed into the interview schedule;*
    - *emergent issues - those issues that were raised by the respondents*
    - *analytic issues - those themes that emerged from patterns and re-occurrences in the data*
- *Indexing* – applying the framework to the data. This involved re-reading the transcripts and marking sections of text which relate to themes or sub-themes in the thematic framework.

- *Charting* – collecting all the selected sections under a particular theme and viewing the data as a whole for each theme. The researchers read the quotes and looked for similarities and differences in the data as well as sub-themes that sat below a theme.
- *Mapping and interpretation* - bringing the key themes within the data set together and pulling together the findings of the analysis as a whole to address the aims and objectives.

To ensure consistency of coding, three experienced qualitative researchers read the same two transcripts. Researchers coded the transcripts independently and then discussed what had emerged from the data within the transcripts (familiarisation).

They then analysed the data to answer the research questions (identifying a thematic framework). Each of the researchers then coded and analysed a sub section of the data sample (e.g. registrants, assessors, etc.).

The researchers then discussed their coding again, and started to draw together the themes identified within the transcripts. There were overlaps within the data which identified saturation across sources but also highlighted important differences from the data sources.

The researchers then discussed the analysis and how to best capture the evidence from the interviews to inform the research questions. After much discussion it was agreed each of the researchers would focus on extrapolating data in relation to the five HCPC standards plus fitness to practice and recommendations for change. This formed the analytic framework which enabled the findings from each data set to be input into the framework matrix (indexing).

Each main theme (standards) was analysed within each participant group (e.g. registrants only) and then across all data sources. The standards provided a revised coding framework, however it did not capture all of the meaning from the data. We therefore included data related to fitness to practise and recommendations separately to the five standards (mapping and interpretation).

The initial findings were discussed with the PPI group to allow further refinement of the ideas from the data analysis, particularly in connection to the recommendations.

Qualitative findings:

Forty-four interviews were conducted overall. Participants represented a range of professions and settings. See Table 7 for a breakdown of respondents interviewed within each group and see Table 8 and Table 9 for the breakdown of professions for all respondents. The telephone interviews lasted between 20-45 minutes on average.

Table 7 Interview sample

Type	**Sample size (n)**
Employer	10
Registrant	15
Council Member	5
Assessor	14
Total	**44**

Registrants (n=15)

There were fourteen females and one male. Their age ranged from 25-55 plus. They were all British. Years in profession ranged between less than 6 months to forty-two years' service in their profession. See table below for profession.

Table 8 Overview of registrant's profession

Profession	**Sample size (n)**
Radiographer	3
Speech and language therapist	1
Physiotherapist	3
Social worker	3
Occupational therapists	3
Do not wish to disclose	2

Employers, Council Members and Assessors (n=29)

There were twenty females and nine males. Their age ranged from 25-55 plus. They were all British or Irish white. Years in profession ranged between less than 1.5 years to forty plus years' service in their profession. See table 9 below for profession.

Table 9 Employer's, council member's and assessor's profession

Profession	**Sample size (n)**
Radiographer	1
Speech and language therapist	3
Physiotherapist	4
Social worker	3
Paramedic	3
Dietician	4
Psychologist	1
Biomedical Scientist	1
ODP	2
Hearing Aid Dispenser	1
Senior Manager	3
Other	1
Do not wish to Disclose	2

Introduction to the findings section

At the end of each section there is a summary box of findings for that section to help guide the reader to the key points from the findings. Data was not analysed by individual profession as the numbers within professions were often small and findings were aggregated within stakeholder groups (registrants, assessors, employers and council members) to provide an overview from all participants' views on the CPD and audit systems. However where there were some differences between the different stakeholders and this is

highlighted in the findings and summary boxes. Nerveless findings often triangulated across all stakeholders.

General comments about the standards and audit system

Clear and straightforward to understand

Generally council members, employers, registrants and assessors thought the standards were clear and straight forward to understand.

> *"I think the standards and flexibility in the way that registrants can undertake CPD is very, very accommodating, its non-punitive and I think that a successful way of approaching it…the standards are very good and pretty timeless" (Assessor, 05)*

> *"I think their standards are actually quite clearly laid out and they do, they do apply to all, you know conducts, so you know I do think that's, that applicable to all the professions yes" (Registrant, 14)*

> *"I think they're standards are quite clear and I think now the way that you have to fill in your forms I think that's quite clear" (Employer, 06)*

The respondents thought the standards were broad enough to apply to all professional groups; they focused on the right issues, often overlapping with the standards of professional groups and were relevant to the direction of the NHS Trusts.

> *"A couple of things what you have to do is to pull in line with obviously what HCPC wants in line with what the organisation values are as well, so we have to marry the two up, fortunately I don't find that too difficult" (Employer, 07)*

> *"the British Society for Hearing Aid Audiologists that's only for the private sector, now they produce their own code of practice and their own code of practice at times mirror's very much and is very much in tune with what the HCPC standards are" (Employer, 08)*

> *"As a profession it's very clear what is expected of the social work professional when they are looking at the capabilities that they are developing and what is expected of them at each level and therefore I think it's, it's easy in a way to see, ok whilst I'm working am I able to demonstrate some of these competencies and capabilities" "(Registrant, 15)*

HCPC documentation and website

Most council members, employers, assessors and registrants reported that the HCPC documentation and website were clear and helpful. Some employers reported that the standards could easily be engaged with in everyday practice and the audit could be easily planned for. Examples of CPD portfolios are provided online for a range of professions. However, some registrants said there was a lack of CPD examples for independent practitioners.

> *"I think if you get audited it's all very self-explanatory, they go on the site and they can see what they need to do and they'll find through the CPD of course they have got the evidence but just not thought about in what context they use it" (Council Member, 01)*

> *"I do the action plan and then I write four points ... what's relevant to your future practice, what contributes to your service delivery this month and what's benefitted the service user this month. By the time it gets to the audit, you've got twenty four pieces of evidence that you can literally just cut and paste and then write the five hundred words"* (Employer, 02)

> *"I think the HPCP website, and CSP website is actually quite good now at directing people into how much they need to do" (Assessor, 08)*

> *"I think it's very effective as long as people read the guidance then it seems to work, it seems to work well in the fact that they describe not only what they've done but how it's made a difference and how its raised standards" (Assessor, 10)*

> *"You turn to the places for guidance and you will find you know, a standard practitioner I think, a manager and a lecturer type guidance on both website because the college of OT provide that guidance for the HCPC, so it's the same thing basically but nothing for the independent practitioner"* (*Registrant,* 11)

Audit selection – anxiety

When registrants were first selected for audit they mentioned a high degree of anxiety. They were aware of the seriousness of the audit and the consequences of not passing. Many registrants had completed their audit during the first round and at this time felt there was very little known about the process. Some employers reported registrants were struck with fear at the thought of having their CPD profiles assessed. Some of this was explained by

length of service, individual organisational and time management skills. Once registrants knew more about the process and had been through it they felt less anxious.

> *"I think there's still the stigma isn't there of the audit and being selected for audit. I think once people have been through the process they're not so worried about the process itself" (Registrant,* 02)

> *"I did take it very seriously I mean and I was very anxious about it…I'm thinking, oh, my gosh I hope I'm not going to be struck off, with no salary because I knew what the implications was that you, you basically would not be able to practice because you know you wouldn't have met the required standard, you'd obviously be frozen, you'd be put on hold and obviously that would have huge implications for you know, rent and all your overheads" (Registrant, 05)*

> *"I think it's actually a very scary process it causes great consternation amongst all professionals but they're, you know they're CPD is going to be looked at I actually think it's, looking at it I do think it obviously works very well because it, there is a fear factor involved but I do think yes, It seems to work well, I think there's an awful lot to deliver, it does seem a large amount to have to deliver with the sort of fifteen hundred words and the different, different sort of amounts to write but yes, I think on the whole it works quite well" (Employer, 07)*

Several assessors also reported that registrants felt stressed and anxious about being called to audit. This was mostly related to registrants who were unsure of how much to submit and the format of the portfolio.

> *"considerable amount of anxiety still where people are being called for audit where there is a very good base of CPD activities that are going on and what CPD entails and means and involves that they are doing it all" (Assessor, 11)*

> *"I think people find it very stressful and I wonder what could be done about that really about making it light touch but robust" (Assessor, 14)*

> *"I think it's quite effective because if you're talking to colleagues around the time that the renewal letters come out people are quite anxious about being selected" (Assessor, 03)*

CPD embedded in practice

Time since qualification (audit ready)

Registrants, council members, and assessors commented on how variations in the time since graduation seemed to impact on how much CPD was undertaken. Those who had been in education more recently found CPD and the audit process less of a challenge than those who have been working in the profession for a longer time period. CPD and reflection may be more automatic and comfortable for those who have experienced it recently throughout their education and training. They may also be more aware of the importance of CPD and the need to constantly improve their practise.

> *"I wasn't too concerned but it hasn't been that long since I was at Uni and you know you get, I was thinking, I was, I've graduated now ten years so it was about seven year, so it wasn't a massively long time out of university, so to me it wasn't a, too scary to be faced with having to do that project but I think some of the people that were sort of having graduated a lot longer they were obviously, they were more anxious about it, so I think having the support for them was really good" (Registrant, 04)*

> *"Students who have gone through to higher education have a better understanding of the fact that they're responsible for their learning, whereas people haven't had everything and everything's been handed to them on a plate and if they haven't been given a course then they're not going to be doing CPD" (Assessor, 07)*

> *"I think the people who are fairly new to the profession and have obviously been sort of recently trained I think because it's such a huge part of the courses I think perhaps it will be easier for, for people like myself more recent graduates because it's something that's been instilled in us since we've been training, I think people who have been qualified for several years they find it more of a challenge" (Registrant, 10)*

CPD better aligned to certain professions

Some of the regulated professions seemed to have more of a reflective culture in their practice and may embrace CPD requirements more openly within the workplace, for example, clinical psychologists. This can be encouraged by offering protected time, support and funding opportunities from employers to help complete CPD in the workplace.

"Psychologists have a history of always being keen on doing CPD its not usually an issue of difficulty of getting them to do it, the problem more recently I think has been, particularly with those who are working in local authority educational psychologists or health service the clinical phycologists is actually their employer has been reluctant to fund activities and that has been a bit of an issue over certainly the last three or four years" (Assessor, 03)

"…in the NHS I think the systems encourage this because it's well known. I think that people that are maybe outside in private practice that may not be the case and also with my profession, college our Royal College do a system to enable that to happen as well" (Assessor, 01)

"If those registrants have always kept their records up to date it's quite straight forward, I think some professions find it easier than others like ones are more use to reflective practice maybe students who qualified more recently, those who maybe qualified a long time ago or maybe from a different profession you know maybe those who came in the grand parenting route you know might find it more challenging but that's just more anecdotal evidence" (Council Member, 03)

Standard 1. Maintain a continuous, up-to-date and accurate record of their CPD activities;

Keep skills up to date

Standard 1 is about maintaining an up-to-date record of CPD activities. The system requires registrants to continuously update their CPD and improve their learning. CPD requires registrants to take the opportunity to take time out of their day to day work and reflect on their learning but there are difficulties in achieving this, such as; busy workloads and meeting day to day targets.

"I think it makes us a better professionals and acknowledges our learning processes that we do continuously throughout our career which maybe we would of done previously but not acknowledged the importance of what we've been doing and it enables us to see the, to be able to reflect on what benefits that has to patients because anything that improves our service or our service delivery is going to obviously benefit the patients" (Registrant, 02)

"I think it was quite obvious the information they were looking for while they were doing it and I think that it's a good idea in some respects because you know, you've

got to be able to show in some ways that people that are registered are keeping up to date" (Registrant, 04)

"When you're at my sort of level you don't collate this information particularly on an ongoing basis, so I had to sort of think carefully about how I could look at the various standards and how I could meet the standards basically" (Registrant, 06)

CPD conducted in own time

Registrants and employers reported that registrants had little time to use for CPD activities (and collating) as most of the writing was done in their own time. Some older colleagues reported that previously no work time was allocated to CPD and all write ups were in their own time.

"When talking to other people, when talking you know they're very tired even though I know that they have service off CPD days but they're all quite a distance away or it's on your day off, you know you've got to go in your own time, own expenses and I think some of them are a bit, don't do enough because of the demand of the job that's happening and they are probably extremely tired" (Registrant, 01)

"I don't know whether there's an element of some of the more senior member of this team are very, very busy and don't necessarily use their CPD time like they should do, I do give everybody, if you're full time you get, you get a session a month to complete your CPD work, so that's three and a half hours" (Employer, 07)

Support from employer (time and money)

The reason for CPD being conducted in registrants' own time was often associated with service demands and a lack of time. Employers did not seem to prioritise CPD therefore registrants had to find time. Registrants felt a lack of support from their employers to be able complete their CPD and audits. There were particular issues with collating the information rather than undertaking CPD activities.

"I do feel that there's not enough support given or time is given for people to make sure that their training is up to date, very much so" (Registrant, 01)

"A lot of it (CPD) if you add on the written up work and the reflection would probably be done in your own time, we certainly don't have the same protected time as the medics in our profession, in our, in our service do, we don't have any ring fence time

apart from the three hours every, every month and that's not really sufficient if you think that might be attending a lecture, it might be looking through some research paper and then you've got to complete your log and your journal" (Employer, 06)

"I think that (inaudible 0.09.24.7) doesn't always recognise that people you know, have got very busy lives as well as very busy jobs most people I know, you know they've got other commitments outside of that and actually trying to squeeze CPD in is, is, can be quite challenging" (Registrant, 10)

However, there were differences in the amount of employer support given to registrants to complete CPD and audits. The HCPC requirements of continuously updating their record may enable registrants to say to employers that they need to do CPD. However, some registrants did receive some time to complete their audit but others did not. This was more dependent upon the Trust or department within an organisation rather than the profession they were from.

"I got some time allocated to me by work to do some general work hours, to give me a chance to do it, obviously the only side of it is it's all a bit time consuming on top of like you know a full time job but you know it had to be done and it was a success but it took some time to do it" (Registrant, 04)

"My experience of doing my piece of work was very, very isolated, I did it very much as an individual, I had to source my own training background and there was certainly no help in terms of putting anything together" (Registrant, 05)

"Is there a cost then related to that as well, I mean obviously working in your own time in August bank holiday, so it's cost to obviously yourself , let's not forget it's just not monetary" (Registrant, 06)

"I think professionals would support it from that point of view because it does mean they can, they can go to employers and say look we have got to do some training otherwise we'll risk losing our registration and the employers need to build time into the work practice to enable them to do it, which I suspect without the HCPC they probably wouldn't" (Assessor, 03)

Often as a result of the difficulties they had previously experienced in collating evidence registrants were keen to improve their record keeping in case they are selected for audit again in the future.

"I've been quite vigilant about making sure that I'm keeping everything now and I've got a folder and you know god forbid if I do get picked again because of course I know you can be picked a second time" (Registrant, 05)

Summary of findings - standard 1

Standard 1 requires registrants to keep a continuous record of updating their CPD activities. Some professions, for example, clinical psychologists and those registrants who had recently been through education felt that reflection on their practise was easier and more intuitive. The importance of the requirement was clear as it requires registrants to reflect on their learning and update their skills. Registrants felt keeping a continuous record was a challenge to achieve in work time, particularly because of service demands and work life balance. There was a mixture in the level of support offered from employers; some allowed protected time for CPD and audit related activities while others did not. This was dependent upon departments within organisations or Trusts registrants worked within rather than by specific professions.

Standard 2. Demonstrate that their CPD activities are a mixture of learning activities relevant to current or future practice;

Flexibility of HCPC standards/ CPD activities

Although most of the registrants worked in patient or service user facing roles, there were some who were working in roles with minimal contact, for example those who spent most of their time in university and management settings. This led to difficulties in being able to fit the HCPC standards to their CPD.

"If it [selected for audit] happened now I don't know how much support there would be for me to get the information about is it related to my job role and am I evidencing that I'm meeting I'm fit to practice in my job role. Or is it that I have to evidence that I'm fit to practice as a physiotherapist, do you see what I mean" (*Registrant,* 07)

Several of the registrants were not in either a clinical or practicing post. For example, they had a managerial, strategic leadership or educational role. These registrants found it difficult to understand what was required of them in relation to meeting the CPD standards for audit.

"I had a number of academic CPD profiles to look at and the academic staff really struggled to identify their own professional development needs. They talked merely about the impact of their own research on others…so a number of academic ones had to be sent back to say…how do you identify your own needs?…" (Assessor, 09)

> *"Often as peoples roles had become more senior their scope of practice had moved away from perhaps a very clinically focused job it might be at a more strategic level, so it might be more difficult for them to draw the lines between the learning and the practice" (Assessor, 13)*

> *"For example standard two a registrant must identify that they're CPD activities relevant to current or future practices, well I, you know I'm practising as a manager basically, so I had to, I had to you know think of what was appropriate and I did that to the best of, you know I gave a range of, I gave a range of examples and evidence of the things that I do as a manager really and, and there relevance to Occupational Therapy but also you know general management really, which is the best I could do" (Employer, 06)*

The standards are very flexible as a range of CPD activities are allowed to be included. This was often seen as positive given the wide variation in what registrants are doing day to day within their respective professions.

> *"I think the fact that they allow people to have a variety of different activities, it allows people, because we all have different learning styles I think it just is able to allow each individual to achieve CPD irrespective of what's going on within their department, it takes into account you now the limited amount of time that we all have as radiographers between our personal and professional lives and I think it just acknowledges that everybody is different and that you know we need to embrace the fact that we are individual learners and that anybody can achieve CPD, it's not an impossible task it's something that we should all be aiming to do and it is actually easily achievable" (Registrant, 02)*

> *"Amazing to see the range of work that's done within our profession. It really reminded me of how wide the scope of practice we have…it's quite humbling. I come out feeling good about being a social worker doing a CPD. I felt really proud…it was really refreshing, inspiring" (Assessor, 09)*

> *"So I think for me as we move forward in to how we look at the CPD process and the support is actually trying to create more case studies and more material around getting people to think broader than a traditional course or an article or a in-service training session to actually be able to reflect on CPD" (Council Member, 04)*

Ambiguity of the CPD evidence required

Although the guidelines were seen as clear to understand, the way to evidence the CPD was not so clear. There were often initial confusions about what CPD evidence to produce for the

audit. When possible, registrants often tried to produce several different examples of evidence.

> *"There's a lot of things that we're doing all the time that could be counted and we perhaps aren't necessarily aware of the evidence that we could collate regard that I think there may be some people will view your CPD and their certain way and it will encompass for instance courses and actually your CPD involves a range of different tasks and I think that maybe people aren't necessarily aware of that" (Registrant, 04)*

> *"One of the standards is around a registrant to ensure the CPD had benefitted the service user well that one I can remember so I used a serious incident report and action plan example, the business plan, minutes of a meeting, the, the complaint response you know, so I tried to use several examples" (Registrant, 06)*

The assessors said there was also ambiguity of what is required from the standards and there was confusion over what CPD is.

> *"There's a bit of ambiguity in some of the wording but it may be that's quite deliberate because once you start being very cut and dry there's no room for manoeuvre. ….It's something where it says you should aim for your CPD to improve the quality of your work…there's quite a lot of 'may' and 'you should aim'…but generally it is very clear" (Assessor, 10)*

> *"What you've done isn't CPD its your job, cause there was an element of that people just putting down their job description and saying that was CPD" (Assessor, 09)*

> *"They haven't done any courses and were expecting things to be provided by their employer, and not taking responsibility for their own CPD" (Assessor, 07)*

Some assessors reported that one of the difficulties for registrants when being audited was having to link the standards to their work, and that the range of acceptable evidence may be too wide.

> *"when the standards were first written the deliberate intention for it to be wide so the people had a range of ways to meet the standard on the whole what that has meant is that almost universally people struggle to bring their CPD into a structure and they might be doing very good CPD…"(Assessor, 11)*

Summary of findings - standard 2

The flexibility offered by standard 2 enabled registrants to include a variety and range of CPD activities. However, this was more difficult for registrants who had either an educational role or a managerial/non-clinical role. There was some ambiguity with what evidence to provide for the audit. Although the guidelines were seen as clear to understand.

Standard 3: seek to ensure that their CPD has contributed to the quality of their practice and service delivery;

Registrants reflected on how doing CPD made a difference to them and to their practice. It facilitated a plan of action and what to do next. CPD was viewed as something that kept them developing in their professional practise.

> *"I do think the standards are ... they make sure that your learning goes full circle. It's not just a sort of you've got to do some learning, you've got to look at what you do with that learning. Yeah, I just felt the intent of what they are asking you to sort of look at with the standards, you've got to keep a record of what you do, that you've got to do a variety of activities, that it's relevant to clinical practice, that you then use it to benefit your service" (Registrant, 08)*

> *"It's about just recording the fact that this is something that you learned today and as such it may have changed the way you practice, or that your considerations for the same type of patients in the future. So it's all good examples of a way that you can grow as a person within your profession" (Registrant, 09)*

> *"I tend to write up what I've got out of it and how I've changed in practice and how I'm changing things from that conference and that's more sort of papers and newsletters things like that that I'm sending out to people. So that's different types of evidence" (Registrant, 07)*

The CPD system was seen by some to motivate registrants to reflect on their learning and link it to practice. They thought that the standards were necessary to encourage registrants to reflect on their practice.

> *"I think the whole reflective thing is incredibly important and there again that's something that I'm very, very aware of if a referral hasn't worked out quite right or if I've gone to a care home and I feel information hasn't been disseminated properly then I think it's very important to explore what's gone on there and see how that can be improved, I think it's very important" (Registrant, 03)*

There were some registrants who thought that their earlier university training had already instilled in them the need to engage in continuing professional practice and were seemingly unaware that the driver might have originated from the HCPC education and training standards.

> *"I wouldn't say that the HCPC was a massive factor in it because for me personally, because when I was training and doing my degree at the time it was very much, you*

know instilled in us at that point, so I think that I've always been engaged with it, I think the Trust has a big, a big point in it as well because they make, make it very clear in their Trust policy that we have, that we have to be shown to be doing a minimum amount and whether I'm not sure that necessarily, I don't know whether I would necessarily think of the HCPC as the reason why I do it" (Registrant, 04)

"I don't think it's HCPC that makes me do that (good practice) I think that's just because that's how we're taught when we train, you're always looking for the better way, you're always making it better, you're always using the evidence you've got, you're always looking at being safe, you've got a professional duty of care and that's just how you're trained and that's just, I'm not sure it's, I'm not sure that HCPC have a bearing on the training, on, on changing my practice, I think that's just about being a health care professional and duty of care, I don't think they change it much" (Employer, 06)

Employers welcomed the HCPC focus on CPD that changed practice

Employers reported that they welcomed the focus on change in practice and supporting these HCPC standards were beneficial.

"I think we've gone away from I want to do this training because I'm interested in it, to, I want to produce good value social work for the benefit of families and this is how I think this will help me to do that, and I think that's definitely better, yes rather than just sort of like, oh, I'm quite interested in some of that narrative therapy but if you're never going to use it you know why are we spending public money on that. So I do think you know it's good" (Employer, 01)

"I think that's a good way for it to go really and, then how was what you have done this month contributed to the quality of your practice service delivery? Sometimes I find out about new assessments, find out about an article they have read that's relevant, read some NICE[3] guidelines, whatever it is. So that embeds them into that and then what is it that's looking at your future practice" (Employer, 02)

Several assessors commented that HCPC CPD is effective because the registrant is required to link their CPD with what impact it has had on their practice and on their patients or service users. The assessors recognised that the Standards were asking more from

[3] National Institute For Clinical Excellence

registrants than just attending a course, they were asking them what did you learn and how has it changed your practice; a change from a passive CPD role to an active CPD role.

> *"I think that is important if we are not going to look at those standards then there's no point asking people to work against them. We're just going to get people saying 'yes' I've done these courses, I've done this number of hours then that's one way of approaching CPD regulation but if you want them to demonstrate how they interpret it and benefitted their practice…then that's what they need to articulate" (Assessor, 07)*

> *"I think it's very effective as long as people read the guidance then it seems to work, it seems to work well in the fact that they describe not only what they've done but how it's made a difference and how its raised standards" (Assessor, 10)*

Assessors identified that some registrants have engaged with Standard 3, but there are still others who collect certificates of training without considering the impact on their practice.

> *"There are certainly some people who understand and get what CPD is and can clearly express what they've done in terms of their CPD and more importantly who that's affected their practice and their organisation. There are others that just present a list of training courses that they've been on and if you ask someone, "ok what's the impact of that been" they struggled to answer"* (*Assessor, 06*)

Summary of findings - standard 3

Generally there was positive agreement on the value of this Standard, registrants recognised that it brought direction and focus to their CPD and employers felt it was a better use of public money in that it focused on improving practice and the service. Assessors recognised that the standards required registrants to say how their CPD had changed their practice and what they had learnt from it rather than be a passive learner.

Standard 4: Seek to ensure that their CPD benefits the service user

Council members reflected on the importance of this Standard, and it was very clear that this Standard was high on importance. This standard was also well received by registrants and employers.

"I felt right from the word go that we needed to have a standard that linked continuing professional development activities to an explicit standard on benefits to patient service users" (Council Member, 05)

"I do think it makes people think about and undertake CPD in its broadest sense, I mean I think that from my mind it's one of the real positives about the system, it isn't CPD in the sense of taught courses but obviously that's a part of it but it's the fact that it is that wider range and that you're having to demonstrate different aspects of CPD which I think is really quite critical, so that it is about learning and development in all sorts of ways and also ask, and I think the real strengths in the audit is it's asking people to reflect on what they've learnt and how that benefits the patients and clients" (Council Member, 02)

"The impact it's had on my patients, it was quite nice to actually see that, and it was actually quite clear, you know because I'd done a range of clinical courses that had improved my sort of achievement toolbox, so you can see that, so I was now able to offer more treatment options to a patient than I could two years previously to that" (Registrant, 04)

"I'm an emergency care practitioner with a paramedic background, so I like to try and keep up to date with especially the long term medical conditions so COPD patients, your asthma patients and minor injuries stuff because that's the majority of a lot of my work, so and also probably update the guidelines as well try and you know develop better clinical practice through that" (Registrant, 01)

"In terms of patient safety, I think its undoubtedly good because I think if nothing else you should sort of always be constantly thinking about what you do with a patient, whether you can make it better, whether you can make it safer and in terms of doing that being able to offer the best practice as a patient, you have got to be constantly looking at what you are doing and questioning what you are doing" (Registrant, 08)

"Most of my CPD is helping me to be clinically, keeping myself updated obviously to deliver better patient care and patient safety" (Registrant, 01)

However, some registrants and employers stated this standard was already instilled from training and was already part of normal professional practice, possibly not recognising that the HCPC Standards had been influential.

"I wouldn't say that the HCPC was a massive factor in it because for me personally, because when I was training and doing my degree at the time it was very much, you know instilled in us at that point, so I think that I've always been engaged with it, I

think the Trust has a big, a big point in it as well because they make, make it very clear in their Trust policy that we have, that we have to be shown to be doing a minimum amount and whether I'm not sure that necessarily, I don't know whether I would necessarily think of the HCPC as the reason why I do it" (Registrant, 04)

"I don't think it's HCPC that makes me do that (good practice) I think that's just because that's how we're taught when we train, you're always looking for the better way, you're always making it better, you're always using the evidence you've got, you're always looking at being safe, you've got a professional duty of care and that's just how you're trained and that's just, I'm not sure it's, I'm not sure that HCPC have a bearing on the training, on, on changing my practice, I think that's just about being a health care professional and duty of care, I don't think they change it much." (Employer, 06)

Standard 4 was challenging for some registrants who no longer worked directly with patients. Registrants who no longer worked directly with patients or service users reported that meeting Standard 4 was not always achievable. This was an issue for managers and academics who could not translate their CPD directly for the benefit of the service user.

"I don't have patients and that's another thing when you work independently you know, who is your user? I'm commissioned by insurance companies or solicitors and I interview their clients or claimants to provide medical legal reports" (Registrant 14)

"Often as peoples roles had become more senior their scope of practice had moved away from perhaps a very clinically focused job it might be at a more strategic level, so it might be more difficult for them to draw the lines between the learning and the practice" (Assessor, 13)

Summary of findings - standard 4

Standard 4 was identified as a very positive outcome following CPD. Council members, employers and assessors all spoke very positively about the aims of this Standard. Registrants spoke proudly about CPD that had produced patient benefit. One registrant referred to it as completing the circle.

However those registrants who no longer worked with patients or service users, for example, managers or educators often found it challenging to translate their CPD directly in to benefiting patients or service users.

Standard 5. Upon request, present a written profile (which must be their own work and supported by evidence) explaining how they have met the standards for CPD.'

Strengths of the audit system

Enforcing CPD is undertaken

The council members and employers were generally accepting that the CPD standards were positive and they were relevant to practice and served to drive up practice. The threat that anyone might be selected at random for audit was for some a *stick* rather than *carrot*, but again respondents thought many registrants, particularly younger ones were already well prepared and organised and were continuously 'audit ready'.

> *"So I think the fact that there are mandatory standards and I could be audited means that I am you know in a sense more rigorous about keeping a record of the activity than perhaps I was before" (Council Member, 05)*

> *"I think it's very robust because it gives an overview because it's service delivery and how does it affect the quality of the work that you are doing in terms of your department and then it's your individual things that you are doing – virtually what difference has this made to service users. Kind of three levels really, face to face level, what difference does it make to service users directly whatever you are doing, whatever your CPD is, how is it impacting on the service and how is it delivering quality in terms of an overarching. So I think it works quite well" (Employer, 02)*

The value of the audit process is that it enforces CPD. It may encourage registrants to conduct more CPD because they are aware of the audit process and the potential to be selected. Without the audit the registrants may be less inclined to undertake regular CPD.

> *"The audit is an extra step, you may do CPD on a regular basis but the audit enforces you to kind of really collate that and I remember it was looking at kind of five particular strands that were important, well I think it would be a great things to do regularly to see that, you know what your five particular strands but I would expect that a lot of people would not do that unless they were actually being audited, kind of look in detail at their work practice in that way" (Registrant,03)*

> *"I think these sort of processes always make you think about what you're doing and the benefits to how your, how your work, how you're working, so it has its strengths in that way really because it makes you, it forces you I suppose is the answer to revisit the standards that we are required to keep by our regulatory body" (Registrant, 06)*

Assessors also believed that regulating CPD has had an impact on professionalism and driven up standards of CPD.

> *"Staff do know that their CPD will be audited, its widely known now so when they get it through they all know…I suspect people are much better at, not only doing CPD, but actually keeping a record of it as well…from that point of view it will have had a good impact in the wider professions" (Assessor, 08)*

> *"it does help to make people kind of stay on top of their professional responsibilities" (Assessor, 14)*

> *"it's possible to see differences between registrants so it does have some sensitivity in the system. I think that it is effective in that people weren't undertaking any CPD at all the process would allow that to be identified" (Assessor, 13)*

> *"…staff do know that their CPD will be audited. Its widely known now so when they get it through, they all know, obviously because of that I suspect people are much better at, not only doing CPD, but actually keeping record of it as well…from that point of view I think it will have a good impact on the wider professions" (Assessor, 08)*

The audit is straightforward, and is easy to complete

Some of the registrants felt completing the audit process was straightforward. They received clear information and had no issues in completing the documentation.

> *"I was audited the last time around which would of been 2012 and yes, I passed that, so it was fairly, it was a fairly straight forward system actually, they gave, they sent through information of what they wanted included, they were quite clear what I need to fill out and then I think if you're keeping up to date with your CPD folder it was pretty easy really, had to draw out information from it just document what you've been doing" (Registrant, 04)*

Similarly the assessors believed that completing the audit was a positive experience for registrants.

> *"I've seen people go through the process and my staff as well as being an assessor for HCPC and I've found it to be quite a positive experience…I think the process allows for individual flexibility but it also provides some sort of structure that's not too rigid" (Assessor, 01)*

> *"What I've found is that I actually quite like the way that they've done it in terms of CPD is quite an individual kind of concept and it can be quite daunting for a lot of people and especially if it's just credits. So my experience of doing CPD quite often it's the formal qualifications and formal CPD activity that's given a lot more weight and stuff that actually makes a difference to patients who are sat in front of you…so I quite like the approach …it can be a whole range of things" (Assessor, 14)*

> *"It has really made people within the Trust want to engage more with CPD" (Assessor, 14)*

Several assessors mentioned that 90% of registrants who go through the audit system pass first time and are not required to submit further information.

> *"Probably 90% are alright the first time, the other ten percent we ask for further information" (Assessor, 03)*

> *"90% of people pass [the audit]" (Assessor, 05)*

> *"It's still fairly high, 85 to 90% meeting the standards first time round so still fairly high but that does mean that 10 – 15% aren't understanding that and I think probably there is a role for giving better guidance on the website and also to people when audits are being requested about what's there" (Assessor, 06)*

Robust audit process (two reviewers)

A strength of the audit system, from the point of view of the assessors, was the way the portfolios were assessed. The majority of assessors reported that they welcomed the opportunity to audit the portfolios in pairs – with at least one assessor from the profession and usually one from outside that profession. Many of them referred to going down to the HCPC offices and going through the paper portfolios as a positive experience.

> *"From an audit point of view I find it more efficient and effective to audit together in a room with other auditors for several different reasons. One is you can shout across*

the room if you like or you do what you do in pairs just say to your fellow auditor "what do you think about this one, I'm not sure…"; you can quickly get an answer…whereas when you are doing that via email you have to send your email off to your fellow assessor…its messy doing it by email" (Assessor, 06)

"I think it's a fairly robust system, I think it's good that there are two people assessing a profile because each person kind of looks for different things there is the rule that you don't have to assess your own profession and that actually can be quite useful as well as having a separate set of eyes looking at it…" (Assessor, 14)

"They've got two people sort of looking through them (CPD profiles), you know discussing if there was any concerns, putting to one side those they might have had more concerns about for further discussion amongst the group, so yes, it all seemed, it's a lot of work but you know what I mean, it seemed a sufficiently rigorous process, you know and obviously it's done by people from the same profession as the CPD portfolios they're assessing" (Council Member, 03)

"I think that the HCPC have developed the information that they've given over the course of the audit process and its introduction and I think the information that's contained within the documents is pretty self-explanatory and assists the registrants in completing their CPD portfolio and with the additional support from the society if you want to choose to CPD now I think it is progressively getting easier for registrants" (Registrant, 02)

Auditing a sufficient number of registrants

The small sample size of 2.5% invited for audit was viewed by council members as enough of a deterrent to boost engagement with the CPD standards. Employers were more doubtful about the sample size, feeling it was too small or even 'tokenistic'. There was recognition that a larger sample would have resource implications which may not be achievable.

"I think the fact that (audit) it exists and people are called is enough of a deterrent, deterrent is not the right word but it does ensure that people comply because it is random so there's always that question of, it could be me next, so not sure having a much bigger sample would make much difference from that point of view, I suppose the question is, is it big enough to encompass those who are potentially not going to comply but then unless you do everybody I don't think you're ever going to resolve that one are you?" (Council Member, 02)

> *"I do think it keeps everybody on their toes, they have quite high anxiety in August, "oh, it's going to be me"! I think it works, I think 2½%, is enough to do to carry out a random sample but I also think it does keep everybody else on their toes" (Employer, 02)*

> *"I think 2 ½% is a little bit tokenistic if I might say, I think it should be a higher number, what that number might be I don't know but I certainly think 2 ½% given the numbers of individuals who are registrants" (Employer, 04)*

> *"I don't think it's effective because if you think the amount, the amount of registrants that you have and the small percentage that, that get picked up, I don't know I think it's just difficult...so I'm not sure its effective" (Employer, 06)*

For the registrants, there were mixed views regarding the percentage and method of selection for audit. Some felt that 2.5% was sufficient but others thought that more people should be audited as it was unlikely to assure the continuing fitness to practise of all registrants.

> *"I think it's a fair process the fact that you know, it's all put into a magical computer and then you get selected by just random, randomly selected, so I do think it is a fair process whether or not if you ask somebody who had been selected twice or, or three times you know, they might not think it's a fair process but it is randomly audited so I do, I believe it is across the board with regards to* professional and the different levels of the profession, it's not just necessarily you know, the ground force of the workers like the band, it's, it's going across the board right up to management and even more senior than that*" (Registrant, 02)*

> *"It's only once every two years, it only randomly selects so you potentially could get away with it for quite a long time get away with not being audited yes" (Registrant, 06)*

Weaknesses of the audit: evidence open to fabrication

Reliance on registrants to be trustworthy

There was a concern by employers, assessors and registrants that the onus was left too much to the registrant, both to engage with and document CPD and in providing validated evidence of it. Council members and employers recognised that some registrants were less conscientious and less than honest. This highlighted that the system was not robust and could be abused.

> *"Their role (HCPC) is they actually control the register, register of registrants but I think they don't have a very consistent system you know. For every person that is caught out, there will be some that aren't. I'm not sure how you police it properly but I don't think that they do police it well because it's all, a lot of it is left down to trust, a lot of it is left down to goodwill and there will always be flaws in that way of keeping information, that's my opinion anyway" (Employer, 06)*

> *"Somebody had submitted evidence of their CPD but the assessors were a little bit kind of concerned about the quality of the evidence that had been submitted, they followed it up and found actually the individual had used headed note paper from a trust that no longer existed so that made them suspicious that actually this individual perhaps had not been, had been less than honest about their evidence" (Council Member, 05)*

The system depends on the honesty of the registrants, which cannot be assumed and it assumes people need to be organised and good at time management.

> *"If you are really savvy and you're really intelligent which most of the service are, you could actually do it in a month and it could still be in, you know they don't do any back work to check that what you're submitting is right, there's so many flaws in the system, so I think it's open to, I think it's open to being manipulated if I'm honest" (Employer, 06)*

> *"I think one of the weaknesses is purely to do with individuals, if someone isn't very good at organising their time and putting time aside to, to make sure that they are keeping the data, they're logging it or however they want to keep it whether it's electronically or hard copy I think that's a weakness you can always spot those who aren't as well organised as others*, struggle more and those who are not good at time management" *(Employer, 07)*

> *"Because they are personal documents so I have no means of really knowing what people are doing and how they're keeping, some people are excellent but I would imagine, I'm must thinking of there's a couple of people who I would think probably aren't fulfilling their professional duty as well as they should be and I think if they were picked up they would struggle" (Employer, 07)*

Similarly the registrants thought that CPD was too reliant on the individual, particularly in terms of their effort and the validity of what is submitted.

> *"I think that it relies on the individuals motivation as a member of staff, I think that you certainly in our Trust you have be shown to be doing a sort of a baseline amount but*

obviously depending on the persons motivation would depend on how much they put into it, so it does rely on the individual to put the effort in and I think that you'll find that in any place that you work you'll have some staff that are very motivated to learn and there are some staff who are quite happy just to sail along. So I think that is some ways you know is a potential drawback because it's how much you want to learn and develop isn't it, so it's got to be based on that person's motivation" (Registrant, 04)

"I know it sounds awful but there is an element of being able to make things up, not that I did but it's easy to say things like I could change the date on that, if you haven't got anyone verifying it you could easily put in oh I did that but I did that in 2001 I've done it now, do you see what I mean. I'm not saying I did that" (Registrant, 07)

"…but I mean another thought has just occurred to me what about social workers who you know, who work in consultancy who monitors them, who looks over their shoulder who , who keeps, make sure they keep their information up to date, that's a purely self-driven thing and whilst you know you can attend a conference you could snooze through the whole thing…Yes but you could just make it up, so yes definitely I think you know the monitoring and the…I mean you know the verification is what I mean, the verification of their evidence is a thing" (Registrant, 15)

A major concern raised by assessors and mirrored from employers and registrants was that the evidence that was submitted by registrants was not validated. Assessors reported that they had no way of checking that the evidence provided by registrants, was theirs or was true. Both employers and registrants made similar comments that they were concerned that evidence submitted could to some extent be fabricated as there was too much reliance on the individual, i.e. the registrant to submit selected evidence for their audit without any form of validation.

"We are obliged to take people on trust in terms of if they make statements saying their experience was in three different areas, we are obliged to take them on trust at that" (Assessor, 08)

"Ok you've read a journal but what have you actually learnt and what changes have you made to practice to benefit service or benefit the service user and benefit you as a practitioner… no element of 360 appraisals or references or feedback from peers or colleagues or any of that sort of thing, I slightly worry…. You're got to be a little bit silly and put something in that you shouldn't in that you shouldn't put in or confess

yourself to having a problem for it to be picked up in the current system because there's no employer input or 360" (Assessor, 05)

"Someone can say Oh I've done this and this resulted in this but there isn't actually any hard and fast evidence that we can m that has come from somebody else to say yes, that's good, so in effect, not that I'm saying anyone ever has or ever would do in the future but you could make it up and submit it and pass and you know maybe you could have some formal recognition from your line manager that yes, this is what's going on" (Assessor, 14)

There were several concerns made from assessors that there was no way of knowing whether evidence submitted against the HCPC standards was real, as evidence submitted as part of registrants portfolio does not have to be externally validated. The evidence is based on trust and professionalism of the registrant.

"The vast majority of applicants, you know when I'm getting a really comprehensive portfolio, which the vast majority are, I don't have suspicions at all that what I'm getting isn't accurate. Its more when one is not accurate, not very detailed, I ask for more and stuff is added in and you think 'that's the work of fiction but there's nothing I can do about it" (Assessor, 08)

"I think the part of it [CPD] that might need some work is how that's checked because it's the person saying, 'I've done this and this is made me better and you know this has made me a better practitioner and I've raised standards for service users by doing X, Y and Z but no one else, there's no corroborating opinion" (Assessor, 10)

"its obviously a spot check and its very limited number of assessments that are called in for assessment so the system is very much reliant on people being honest and doing their own CPD as an ongoing process" (Assessor, 06)

"if the robustness was to be increased you maybe want to look at getting someone else to support that persons facts because you're relying completely a hundred percent on the applicants trust which in one of the things that you need to be trustworthy" (Assessor, 01)

"it's a little bit hard when you are trying to measure something from what somebody has written down on a piece of paper when it's fairly subjective who's written it of you get a third party to validate what's been said but again you could choose who contributes to that as a process its better than nothing" (Assessor, 14)

Time costs needed to engage in CPD and protected time

Collating

The main cost involved with the process was in terms of the time required to collate all of the CPD activities for their audit. The registrants did not discuss the CPD activities themselves as a time burden but were conscious about the process of having to gather and document all of their evidence. There were variations in the amount of time required for this process. Typically the registrants said it took one to two months.

> *"It probably, just being really focused on it, it probably took me a good two months to make sure everything was right, that I'd got everything, that I hadn't missed anything, you know rechecked it, got someone else to recheck that everything was you know, all in place, so I think yes, a good six to eight weeks collecting everything yes and, and obviously cross referencing everything" (Registrant, 01)*

> *"I think the whole process took, I mean it probably took me a good month to get al.,l my information together and I think in terms of putting together the, the file documentation in terms of my profile and training" (Registrant, 05)*

> *"I had to go back over everything, you see that's the problem I didn't keep it as a continuous diary I keep everything there and then I wrote it up as a sort of spread sheet of everything that I'd done and then put the evidence in to that. So there was quite a lot of sort of collecting it all up" (Registrant, 07)*

The assessors were aware of the amount of effort and time that registrants had put into their portfolios.

> *"the system is designed so the burden on registrants who have to submit [an audit] evidence is not huge…I can see from the portfolios submitted that people have obviously invested huge amount of time in generating them sometimes, so while it's a strength in that I think the system isn't designed to put people through a very onerous process I think sometimes it does anyway because what it asks for can be taken to be quite onerous" (Assessor, 13)*

Lack of feedback

When registrants passed their audit they received no other feedback about their submission. They often felt demotivated after the amount of time and effort they had exerted to this anxiety provoking process.

> *"I think just to say that you'd been successful in your audit was a bit sort of like, oh, is that it, you know after all the effort that I've put in and the time and it was very sort of like a bit deflated actually" (Registrant, 01)*

> *"When I sent, spent a huge amount of time putting information for my audit, you know basically when I got, I was told that I'd got through you know it was like, oh, so I didn't get my head chopped off, there wasn't any kind of positive feeling of about thank you for spending so much time putting this together or any kind of acknowledgement that anyone had even read it you know it felt like that I'd, I'd ticked a box and that I suppose is quite de-motivating" (Registrant, 03)*

An issue raised by some assessors was not being able to provide the registrants with feedback other than they had passed their audit.

> *"Well they do get a letter to say [they've passed their audit] I think for what they, the effort that they put in they don't necessarily feel that it's enough, I don't know what they would like…something more substantial" (Assessor, 01)*

> *"I think that leads to a weakness in that I think for registrants the system is quite unfulfilling in that they devote hours of time to generating a very professional and robust portfolio and then get back a one liner to say that you've met the standards, very, very bland I think an very I can imagine the disappointment in that they in some ways want to perhaps get more feedback" (Assessor, 13)*

> *"We are quite restricted were told clearly what you have to respond to and I often think that when I see a really good presentation someone who's CPD is absolutely brilliant but we can't [say] its …you've done an amazing portfolio you have obviously spent a lot of time …they get the same response as somebody who's done the bare minimum to get by and I often think a bit of encouragement for people" (Assessor, 14)*

> *"I'd like to say to someone come on you've only just scrapped past, they've only just got through and actually you might want to consider doing some more CPD over the next two year period" (Assessor, 14)*

The lack of feedback may lead registrants to question the time and energy they put into CPD in the future.

> *"I felt afterward, yes maybe I could have done like a third of the work and probably would have still passed and I would have saved myself the time." (Registrant, 04)*

> *"I'd put a hell of a lot of work in to it and only knowing the outcome that you're ok and you can carry on practising was I don't know it just didn't reaffirm how much you'd done, how much work I'd done to put into that"* (*Registrant,* 07)

Supportive system rather than punitive

One of the biggest concerns raised by the assessors was the number of times a registrant can be asked for additional evidence to meet the HCPC standards. Several assessors voiced their concerns that in its present form the audit system would not allow registrants (who could not meet the minimum standards) to fail the CPD audit. Assessors reported requesting evidence from registrants several times over a number of years and feeling frustrated with the HCPC systems.

> *"Requested further information, it's been sent its not covered so I've sent it back and that process goes on for three or four times till you get to the point where it's not going any further…they are not going to be able to submit anything more than they've submitted. Does that mean a fitness to practice matter and that isn't something that's taken up by HCPC they won't do it…it's frustrating that the impression is that the HCPC are hamstrung by their own policies…there's no point in keep asking for further information about that period. What we should do is give that person an opportunity to demonstrate that they're currently engaged in CPD" (Assessor, 07)*

> *"……they [HCPC] said from a legal perspective we can't insist somebody does something, we can only suggest they do it, an dim like well as a regulator I think actually we can say 'you must' now, rather than you may wish to…if you want to stay on the register you must comply" (Assessor, 09)*

> *"I think it's interesting in that time I've done it there's not been a single person that we've not passed, there's been people that we've asked for more information and I think I can think of perhaps one example when somebody was asked for significantly more information, they chose not to continue with their registration" (Assessor, 05)*

The public's perception is that the regulator is there to make sure the practitioner is keeping up to date with the standards. However some assessors reported that they had concerns that there were registrants on the register who were given too much leniency.

> *"…I think the thing that can be concerning for ourselves is that the public perceives the regulator is upholding standards, but what they perhaps don't realise is that those*

standards are at an absolute bare minimum. So when people aren't managing to meet that bare minimum I don't know why our approach isn't one of sanction rather than maintenance on the register" (Assessor, 09)

The council members also described a supportive rather than punitive CPD and audit system, where registrants were given every chance to pass the standards. Requests were made for more information and staff offered help to guide them in the process, being removed from the register by the HCPC was seen as a very rare event. Instead the staff engaged and nurtured registrants to support them to pass the audit.

"I know we've had feedback where people have said when they've been selected initially it's been very daunting but actually when they've got to the end of it they've found it a very, very useful process and a helpful process, a constructive process, so we have evidence to say that" (Council Member, 04)

"Then if somebody submits a portfolio that isn't deemed to be adequate again in a developmental approach this is exactly what we want our CPD system to be is developmental rather than punitive then people are actually given the advice of where that portfolio is lacking, where the weaknesses are etcetera and some time to address those areas. So again that helps that individual come to grips with it and actually hopefully the process of complying with the CPD audit will actually enhance and develop them as an individual. Then of course finally there's a very small minority that actually fail ... recognise that they aren't complying with the CPD standards and therefore will remove themselves." (Council Member, 04)

"If there's insufficient material people are allowed to, you know are given time to submit more evidence and I think it's very rare that we ever, not allowed to reregister, you know it's more the people voluntarily chose to come off the register if they haven't engaged with the CPD process" (Council Member, 03)

Raising concerns about fitness to practise

Employers reported that the HCPC only wanted to get involved in a fitness to practice case once the Trust had investigated the case. Also others reported on how long the process took to come to a hearing, often leave the registrant still practicing thus leaving patients vulnerable to potentially rogue registrants.

"I don't think the HCPC can actually hold their hand up and say that they ensure that all practitioners are safe and effective and that patients safety is there...but I actually

think actually day to day management it's not the HCPC it's your internal system that are more important which then gets fed back to your quality care commission" (Employer, 06)

"My concern was how long it took for, for that to happen because the guy was practicing for over a year after he had been sacked and I was sending all the information off to the HCPC it took more than a year for them to then finally bring the case, a case that ultimately did result in him being struck off" (Employer, 08)

Summary standard 5

The audit system was seen to enforce that CPD was done and that it had driven up standards within the professions and ninety percent of registrants who go through the audit system pass first time. There are two reviewers assessing the portfolios and this was seen as a particular strength of the audit process and made the system more robust. There were mixed views regarding the number of people audited (two and half percent). While Council members felt that the number was adequate to facilitate CPD engagement; employers and some registrants were more sceptical. They felt the sample size was too small and cannot assure continuing fitness to practise of all registrants. However there was recognition that to increase the audit sample size would be resource intensive.

Weaknesses of the audit included concerns from employers, registrants and assessors that evidence provided by the registrant had not been validated. Evidence could potentially be fabricated and therefore the system is not robust.

The majority of costs related to audit were reported to be in relation to the collation of evidence and not the CPD activities themselves. The assessors were aware of the amount of time registrants had put into their portfolios and reported feeling somewhat frustrated that they were unable to give some recognition to the registrants. Equally registrants reported that they would have liked to have received some recognition for their time and effort.

One of the main concerns raised by assessors was the number of times a registrant can be asked for further information to meet the HCPC standards, which all takes time and is potentially too lenient a system. Council members viewed the system as supportive rather than punitive. Assessors and employers raised concerns about whether the HCPC system was adequate to assure the continuing fitness to practise of registrants. All participants reported that they were not aware of anyone being removed from the HCPC register following their CPD being audited.

Improvements to the HCPC CPD and audit system

Registrants requested more feedback

The registrants who had been audited said they were informed that they had met the Standards, but that was all they received in terms of feedback. They were not given feedback on the contents of what was submitted, or even an acknowledgement of the effort demonstrated in the submission.

> *"I would have loved some more feedback. To actually have known that somebody had taken an interest in what I had put together would have made a huge difference to me" (Registrant, 03)*

> *"I'm sure I wouldn't have been getting a distinction, that's for sure, but it would have been nice just to have got some, you know, subjective individual comments back from the professional marker really. But I mean obviously it has to be done in a standardised way, I do understand that because you know, we are looking at meeting standards here" (Registrant, 05)*

However, the council members suggested that the role of the regulator is to ensure that registrants meet minimum standards rather than to make qualitative judgements about how well or not they are meeting these standards.

> *"So again it's about being clear about what the role of the regulator is and I think the role of the regulator is to say has this person met these standards or not and if they haven't to put conditions and requirements on them so that they do meet the standards... to go beyond that you're encroaching in to a different kind of role which is more akin to a professional body role and I think HCPC has always been very clear that it is not there to support the professions it's there to protect the public" (Council Member, 05)*

> *"The feedback that comes up quite commonly in terms of we give very, well we don't give any ...If we start moving in to that realm then that will actually add time and resource because if we are offering some opinion on the quality and actually making some qualitative judgement of the standard then what we also need to put in place is*

quite rigorous moderation processes as we would at university when we're marking an assessment and assignment that we have internal moderation we have external moderation, which is actually only right if you're actually going to make a qualitative judgement on grading something." (Council Member, 05)

Recommendations

- That registrants are made aware in advance of any CPD profile submission exactly what the outcome will be following assessment of their CPD profile. Also that they are informed in advance why there is no grading, i.e. to do so would involve additional resources that are not available and is beyond the scope of the HCPC remit.
- Create an online facility to enable registrants to log CPD activities and encourage and support an audit-ready philosophy.

Online system

There were many suggestions from employers to make the CPD and audit system more of an electronic online process. For example this could be a database that registrants could log and record their CPD activities and then review at a later date, perhaps during an appraisal. Often there were existing NHS or professional bodies that had already developed such online systems which some of the registrants were using.

"From a CPD point of view HCPC works quite well and I know it must do because we've already had I think two or three members of the service audited and all of them keep exceptionally good portfolios but you have to remember, and I do encourage this, that we have two systems, we have the Royal College of Speech and Language Therapy, we have an ability to collect our own, our CPD through an online diary system which a lot of the team do complete which actually supports them with their HCPC objectives" (Employer, 07)

"If you had an online system that you log into the HCPC you would, you need, it's in that format and you just keep adding things to it, it's already there isn't it... and you know that then that's randomly still randomly audited but it's audited from online, so you don't have to submit anything you just get a notification that your account will be audited in twenty days' time or whatever it would be" (Employer, 10)

The request for an online portal was echoed by the registrants.

> *"We have like an electronic system in our Trust whereby we have all our mandatory training and other training courses can all be logged online, we have a lot of e-learn courses now just to cut down the time spent travelling, so if they're relevant to be done online we've got those courses and what you can also do is we log our clinical supervision every time we do it. We log our clinical supervision so the Trust has a record of complying with our policies and in that you can do a section, you can attach documents, feedback things like that and as you go along it's also linked to our appraisal, so you can log evidence throughout the year of things that you've been doing to show your development, so that when go to do your appraisal you've got a lot of it already logged on and saved on the system" (Registrant, 04)*

In addition a couple of assessors felt that having the flexibility of being able to assess the portfolios electronically but still doing it in pairs was a good way forward.

> *"Attendance at the offices with all these portfolios pile up in a room and kind of locked in a room for seven hours, with kind of a view that you ought to be getting through sixty portfolios in a day feels practically the right thing to do but concentration wise may not be ideal. I find it better to do them on line because I can give it the time" (Assessor, 02)*

Recommendation

- To consider the feasibility of setting up an online portal to support registrants to log their CPD activity and enable registrants to be more audit ready thus reducing some of the time involved in compiling documents.

Continuous audit process rather than a one off requirement

As discussed above, the anxiety of being selected for audit can have a negative impact on registrants. One suggestion to reduce anxiety was to make the audit requirements a continual process, over time rather than at a specified point.

> *"I wish it [audit] wasn't such a big deal …it's great to have the* EKSS [electronic Knowledge and skills framework] *every year that you've got to think I've got to have this up to date whatever there is so many demands on you on a daily basis that something that even though that you know is really important if it's not in your face I think it can quite easily take a back seat… if there's a way that it could be less of a big deal but more, more of a presence in a way, if that makes sense" (Registrant, 03)*

> *"With nurses what their potential thing is they've got to do is they've got to have everything and they just submit the forms to say that they've actually completed all their CPD and they've got signed off by their manager and then they get chosen to submit their evidence if they have to. So everyone has got their evidence, everyone has got that thing, so it's stuff that everyone is doing. Rather than with HCPC you find that it's you don't do it and then you get called up and you're like oh [swear word] I've got this now see if I can pull everything together. Everyone keeps their CPD stuff and everyone does CPD it's just putting it all together in to an essay form takes a lot more time than if they get called up, do you see what I mean, it's not part of their everyday practice and that's what I'd like to see it as part of their everyday practice." (Registrant, 07)*

Consider auditing more 'at risk' registrants

Council members raised the important question about whether registrants who were more at risk should be oversampled for audit. The higher risk could be professions that were proportionately known to create more concerns and registrants who by virtue of their characteristics (e.g. older registrants) were less likely to engage. Clarifying the purpose of the CPD and audit system is important here; is the audit there to sample the level of CPD activity with the Standards? Or is it attempting to identify those not engaging and who should be removed from the register?

> *"I think there's also a question… of whether we would sample groups of professions more thoroughly if the indication of fitness to practice meant that they were high risk… We have some groups that actually are overly represented in terms of fitness to practice statistics compared to the proportion on the register...there's also evidence to say there's certain characteristics of registrants that again make them slightly more liable to disengage, should we be sampling and targeting those groups?" (Council Member, 04).*

Require more multi-source feedback

Registrants often expressed concerns about the validity of CPD profiles and the lack of third party evidence. Such third party evidence could be provided by patients, supervisors, and colleagues. Although the HCPC favour such approaches there is currently no requirement to include such evidence. Council members were also cognisant that the lack of any multi-source feedback or validation by a senior member of staff was an area for improvement.

"I would say that maybe having some kind of overview from you know, some feedback if you like in terms of how professionals are operating within their visiting and their direct contact with the client maybe is lacking within the HCPC you know, evaluation process" (Registrant, 05)

"I don't think we need to change the standards but whether we need to be a little bit more directive about the need for practitioners to get feedback from colleagues, from patients and service users about their practice. I think a lot of them are doing it already but it's probably the one element of the, if you were to compare the kind of the evidence that comes in through medical revalidation and the evidence that comes in through HCPC audits you know we haven't set a requirement around that and I suppose the question in my mind is should we be being more explicit and saying we'd like you to do that" (Council Member, 05)

"I think areas that we need to think about is and this is from me from a personal perspective is do we need to be any more directive in terms of the type of evidence we're looking for. So in that I'm talking about do we need to perhaps encourage more evidence around feedback from service users where does peer review sit in terms of this" (Council Member, 04)

"Perhaps adding an element of triangulation to it, in a sense of you perhaps some, some peer review audit which could be as much about record keeping or observational discussions to, to look at the actual practice rather than the fitness in terms of knowledge and skills" (Council Member, 02)

"I haven't been selected for it but if I were certainly the information in my annual appraisal would be part of the (CPD audit) submissions certainly because it's a record of those things. You know say for example you know training courses I've been on or you know objectives around learning you know that's all documented in my appraisal form" (Council Member, 05)

The lack of a stringent requirement for any third party evidence is now out of step with the requirements of many NHS posts and professional bodies. This type of evidence provides an external view on the validity of CPD profiles and offers some opinion about practice, other than the registrants own view.

Recommendation

- To request that multi-source feedback is collected every two years and a senior colleague signs off the submission as a true reflection of the registrants practice, this could be achieved using the annual appraisal documents, or similar. If the registrant works as an independent practitioner then patient feedback or other feedback could be sought from other organisations that they engage with, if deemed appropriate (as occurs with appraisal and revalidation in independent medical practitioners). This would need to be explored further.

Comparisons with other CPD systems

There was an acknowledgment that similar processes in other professions may require more evidence about the capability of the registrant, for example signing off competence.

> *"When I'm looking at the nursing one a lot of that is about actually working with your people getting them to sign you off to say you're competent at doing the pieces of work and assurance and evidence and that sort of thing. They've seen your evidence rather than actually writing it in a sort of essay form with evidence attached to it, I found that a little bit I don't know it just took a long time to really put it in the right context and gather the right information" (Registrant, 07)*

> *"I would have real concerns about the weight and depths and breathes of what's being required for the nursing profession and about some kind of triangulation for those that are being asked... but then that selected proportion it just helps to give that assurance" (Council Member, 02)*

> *"You have to self-declare every two years that you are keeping up to date with your CPD. So there's a professional accountability through the two yearly cycle that wasn't there for the GMC and I think that's quite important because you know when you tick a box as a professional and you're lying and saying you know then you could be de-registered" (Council Member, 05)*

> *"I think for a start I'd look at the medical model, they need validation and look at where they are with their revalidation interviews and what happens they, they are very mindful when they go in there to have an interview that this is not just a wee cosy chat it's real and there's something about the way this is undertaken and maybe it's just the sheer numbers of this for managers who are managing staff who are not medical staff because they don't allocate the same time to have these interviews" (Employer, 04)*

The HCPC system was viewed as asking for greater engagement with CPD than other systems where registrants collect CPD points. However, not counting hours in terms of CPD was seen as a positive aspect of HCPC CPD by assessors.

> *"You know if they've had a good day they're going to get so many points or something or so many hours whereas really we want people to think a lot more strongly about it and reflect on it and be able to demonstrate why they think it's so appropriate. So, you know so I think we made our registrants work harder in terms of you know, taking responsibility for their own continuing professional development in a good way" (Council Member, 03)*

> *"The fact that the HCPC system doesn't count hours I think is very, very important because once people get sort of fixated on how many hours they've done they really lose track of what they're actually meant to be doing, which is developing themselves as a practitioners, and raising standards for service users" (Assessor, 10)*

Discussion

From the analysis of interview data from council members, employers, assessors and registrants we have reviewed the impact of the five HCPC CPD Standards on registrants. It seems that engagement with the Standards is generally good. However we heard that this was easier for younger registrants than older ones to achieve.

Respondents identified potential strengths and weaknesses within the system. The strengths were focused on the broad range of activity that was accepted as CPD, as well as CPD that changed professional practise and created patient benefit. The effectiveness of the audit was an area of most concern. There were a range of suggestions (discussed above) to improve the system. A particularly important one was to add the request for registrants to provide validation of their CPD submission, for instance through multi-source feedback or appraisal documentation. These documents for many professionals are part of normal practice, and an area which has been shown to be beneficial (Miller and Archer, 2010).

The risks that are being mitigated by the CPD standards and audit system to assure registrants' continuing fitness to practise are complex. The purpose of the CPD and audit system is not clear. One purpose seems to drive up professional practise, and a second purpose seems to assure that registrants are fit to practise and meet the minimum standards.

The HCPC seem to nurture and support registrants, with few registrants experiencing removal from the register following CPD audit. The second role therefore has a by-product as it identifies registrants who do not meet the minimum standards and are not engaging in CPD, and may be in need of remediation or even removal from the register. However, the current random selection of 2.5% of registrants for audit is unlikely to create an impact on the rest of the population. If the HCPC wish to identify more registrants who are not engaging with the CPD Standards they may need to focus the audit on high risk registrants to ensure greater engagement with CPD Standards.

A range of improvements have been suggested and recommended to improve the existing system. One we consider to be the most important, and to which council members and employers seem to agree on, is the need to introduce multisource and appraisal (line manager or similar) evidence. Lack of any validation through third party evidence leaves the system open to the potential of fabrication of evidence.

5. Work stream 3: Survey of registrants into HCPC's CPD systems and processes

Background and Rationale

The HCPC regulates 16 professions including over 320,000 registrants working across many different settings and locations. Therefore to collect data about the impact of CPD and the time and cost involved with the process we developed a survey to capture this information on a large scale. The survey also builds on the qualitative findings from work stream two. The survey results were intended to explore (and to an extent, quantify, the perceived impact and utility of the CPD submission and audit processes amongst registrants, in line with the aims of the project. Moreover the survey was intended to gather data that may help predict how developments relating to the process may be experienced and received by HCPC registrants.

Method

Devising the survey

A subscription to 'Survey Monkey' an online questionnaire tool was purchased in preparation for collecting data. The survey was developed over various stages. The initial survey design was informed by the interview data collection. Comparisons were also made where feasible with the recent medical revalidation survey led by Julian Archer (Plymouth University), but the focus of each item was quite different (appraisal vs. CPD). We developed questions focused on collecting more information about CPD activities that produce change in professional behaviour or/and lead to patient benefit. We also included questions to explore perceptions of the strengths and weaknesses of the system for ensuring continuing fitness to practise. The costs (in terms of registrant/employer time and other resources) were explored through estimates of self-reports and are reported in work stream five. The survey questions were revised and edited following piloting with the various groups described below.

Piloting of survey

In total the survey was piloted with over 20 people including Occupational Therapists, Physiotherapists, Radiographers, Paramedics and Art Therapists. The pilot sample included respondents who were employed by the NHS or independent practitioners, and included respondents who were recently registered (less than one year) as well as older registrants

(with more than 30 years of practice). There was representation from male and female registrants and some were also members of HCPC council, CPD audit assessors, registrants who were audited and those who were not audited. The survey questions were also informed by our Patient and Public Involvement (PPI) group, senior HCPC colleagues, and co-researchers involved in the project. The final feedback from registrants was that the questions were appropriate, clearly phrased and took no more than 15 minutes to complete.

The survey went live on the 18/01/16 and closed on the 22/02/16. The HCPC sent out the survey via a bulk emailing system, and frequent reminders, to the randomly devised sample.

Sampling strategy

We devised a random sample of approximately 3.4% (11,300) of all HCPC registrants (stratified to include the range of professions) to explore the perceived strengths and weakness of the CPD and audit system. The sampling framework was informed by complex survey design principles whereby professions with relatively few registrants were oversampled. This sampling strategy was intended to obtain responses from at least 50 registrants in each professional group (assuming a roughly 10% response rate - on the basis of our previous research experience), in the event that inter-professional comparisons were desired at any point in the data analysis. The proposed sampling strategy is shown in Table 10 below. As can be seen the table the final number of respondents in each group were generally close to those anticipated by the sampling plan.

Table 10: The intended sampling strategy with oversampling of professions with relatively few members, along with the actual final sample obtained

Profession	Registrants	% to be randomly sampled (n)	Expected final sample	Actual final sample	Response rate (%)
Arts therapists	3,672	13.6% (500)	50	50	10.0%
Biomedical scientists	22,798	2.5% (570)	57	58	10.2%
Chiropodists / podiatrists	13,042	3.8% (496)	50	46	9.3%
Clinical scientists	5,340	9.4% (502)	50	56	11.2%
Dietitians	8,763	5.7% (500)	50	76	15.2%
Hearing aid dispensers	2,212	22.6% (500)	50	54	10.8%
Occupational therapists	36,650	2.5% (917)	92	80	8.7%
Operating department practitioners	12,288	4.1% (504)	50	70	13.9%
Orthoptists	1,379	36.3% (501)	50	103	20.6%
Paramedics	21,473	2.5% (537)	54	59	11.0%
Physiotherapists	50,668	2.5% (1267)	127	116	9.2%
Practitioner psychologists	20,529	2.5% (514)	51	42	8.2%
Prosthetists / orthotists	1,040	48.1% (501)	50	56	11.2%
Radiographers	30,694	2.5% (768)	77	79	10.3%
Social workers in England	89,671	2.5% (2242)	224	224	10.0%
Speech and language therapists	15,191	3.3% (502)	50	39	7.8%
Total	**335,410**	**10.3%(11321)**	**1132**	**1208**	**10.7%**

Quantitative analysis

The survey was analysed using the following strategy:

1. The data were checked to see they were coded as expected. Some recoding and data cleaning was required before analysis could proceed. In particular, it was important in some cases to differentiate not-applicable versus 'truly missing' values. Data cleaning and recoding was performed by compiling a *'do.file'* using STATA (a statistical package), which then converted the raw file into a clean, recoded version, for accuracy of recording purposes and, if required, reproducibility.

2. We checked for overall representativeness of our survey sample, where variables were available, with the total registrant data provided to us by the HCPC. This included analysis of profession, age, sex, time in profession, etc.

3. Overall descriptive statistics were produced for the registrants as a whole (e.g. mean and SD of overall responses to each question, or median, as appropriate). For the purposes of reporting, Likert scale responses were collapsed into agreement / disagreement categories. Descriptive statistics included the response rates for each professional group of registrants in order to establish the risk of any response bias. A summary of overall results for questionnaire items relating to CPD activities and costs was conducted, as well as overall results from attitudinal questions. Where applicable, descriptive statistics also included a graphical representation of the responses.

4. We explored the data for any particular occupational differences - e.g. trends across professional groups. Univariable analyses were conducted in order to evaluate the extent to which, if any, professional and demographic characteristics are associated with the responses to the questions.

Findings

Basic demographic information

Overall, according to the sampling strategy devised, 11,314 would have been contacted and yielded a 10.7% response rate (n=1208) (see Table 10). This is comparable to previous response rates for such surveys and almost identical to our assumed 10% response rate when planning the survey. However, the HCPC reported evidence that only around 8,000 of these had at least received and read the email. It is possible that the remaining 3000 did not receive the email due to incorrect email addresses, firewalls, or declined to open the email, this would have targeted a smaller sample of 8000 and thus yielded a higher response rate of 15%.

The most frequent age band (Figure 6) was the 45-54 group (n=379, 31.4%), followed by 35-44 (n=302, 25%) and 55-64 (n=239, 19.8%). The lowest number of respondents were from the 18-24 band (n=24, 2%) and 65 or over (n=29, 2.4%). The majority of the participants were White British (n=935, 77.4%), followed by White – any other white background (n=74, 6.1%) and Asian Indian (n=40, 3.3%).

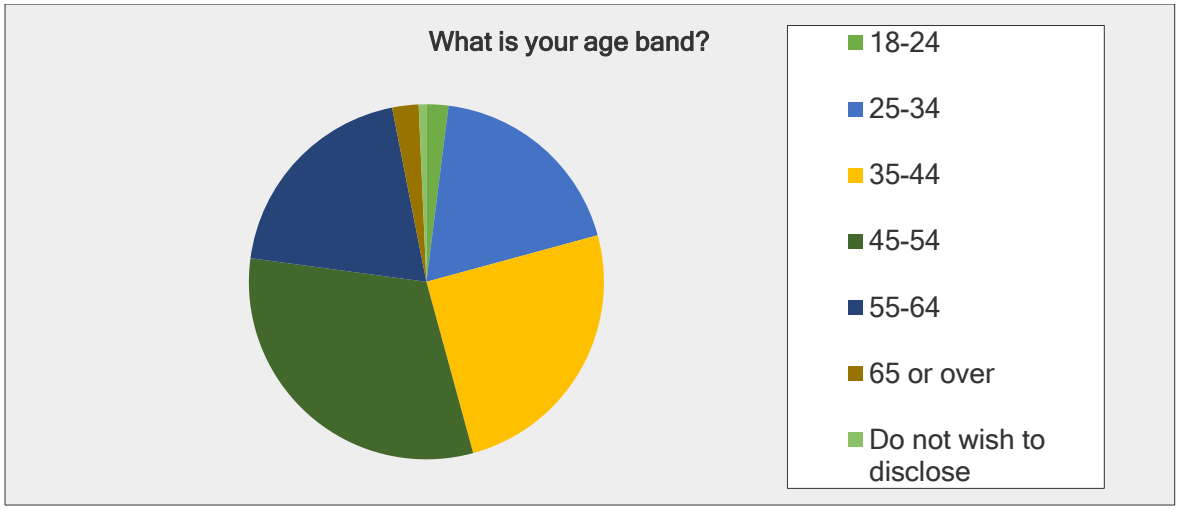


Figure 6 Age of respondents

The majority of the respondents were working full time (n=823, 68.1%) compared to part time (n=385, 7.3%). The registrants often worked across different settings. The largest proportion worked in the NHS (n=732, 61.2%) followed by the independent sector (n= 306, 25.6%). Registrants also worked in university settings (n=56, 4.7%), voluntary sector (n=34, 2.8%), local council (n=204, 17%) and other (n=57, 4.8%). The main employer of the registrants was the NHS (n=660, 55.1%), followed by the private sector (n=244, 20.4%) and local council (n=195, 16.3).

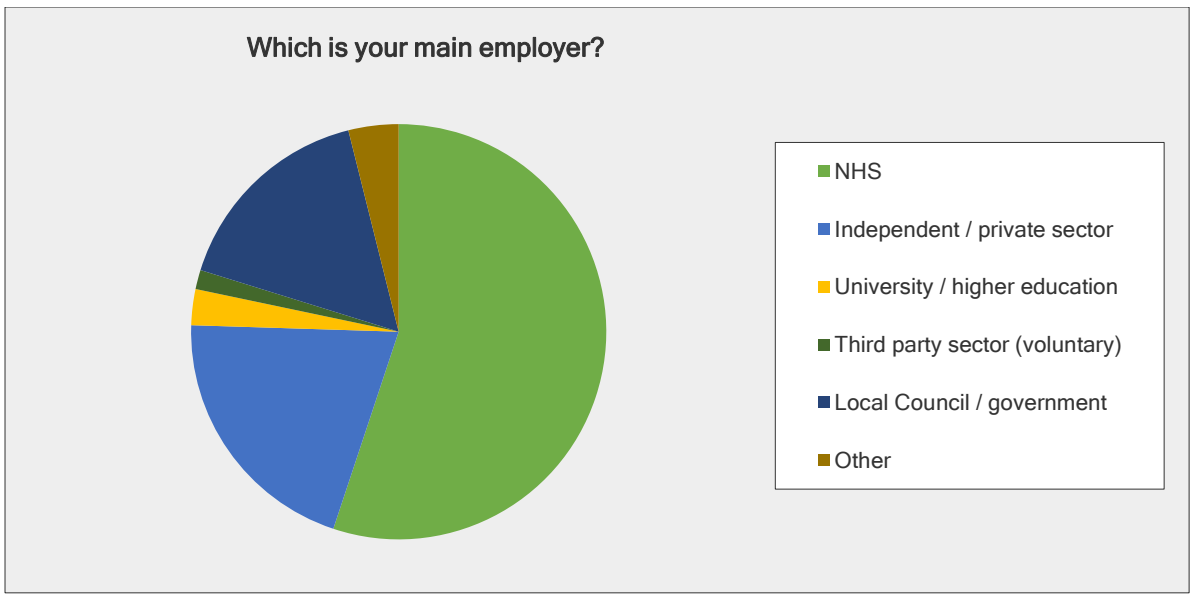


Figure 7 Main employer of respondents

Representativeness of the survey respondents

In order to evaluate how representative the survey respondents were of HCPC registrants overall, some basic characteristics were compared with all registrants using data made available by the HCPC.

In our survey there was a slight over representation of male respondents, in comparison to the sex ratio for all registrants; 23% of registrants were male compared to 25% of the respondents. Due to the relatively large numbers involved this difference reached statistical significance at the $p<.05$ level (χ^2 for difference =4.87, p=0.03). On average, respondents were very slightly older than registrants as a whole (mean age for respondents 45.12 years (SD 11.32); mean age of registrants 43.03 years (SD 11.30). Again, due to the large numbers involved this modest absolute difference was statistically significant (χ^2=43.26, $p<0.001$, on Kruskal-Wallis test).

Compared to registrants as a whole, respondents reported having had more time in practice (average 16.99 years (SD 11.25) vs 9.97 year (SD 9.04). This difference was statistically significant on testing (χ^2 for difference 522.8, $p<.001$ on Kwallis test). However, for registrants as a whole, the time in practice was calculated from the date of first registration. This excluded those who had been 'grandparented' over from other professional registration systems. However, the difference in experience could still have been partly due to underestimating time in practice using this method, as there are other reasons why a professional may register with the HCPC after some time in practice.

The proportion of each profession represented in overall registrants and survey respondents differed somewhat (Table 10). Figure 8 depicts the percentage of each profession in both groups. Table 11 provides an explanation of the abbreviations used for each profession. As can be seen some professions were relatively over-represented in the survey, whilst others were under-represented. Relative to registrants as a whole Orthoptists were the most over-represented group, whilst Occupational Therapists, Physiotherapists and Social Workers were the most under-represented. The results of formal testing of these observations are shown in Table 12. This Table depicts the results of logistic regression, predicting the odds of being in the named profession (compared to any other one), based on being a respondent to the survey. It is unsurprising that some professions are disproportionately represented, given the stratified sampling strategy employed. The survey results were also broken down by professional group and employment type (*NHS, Independent, University*, *Third Sector, Local Authority/Council* and *Other*). However, very few differences in response patterns were observed. The few exceptions to this are noted in the text of the results section.

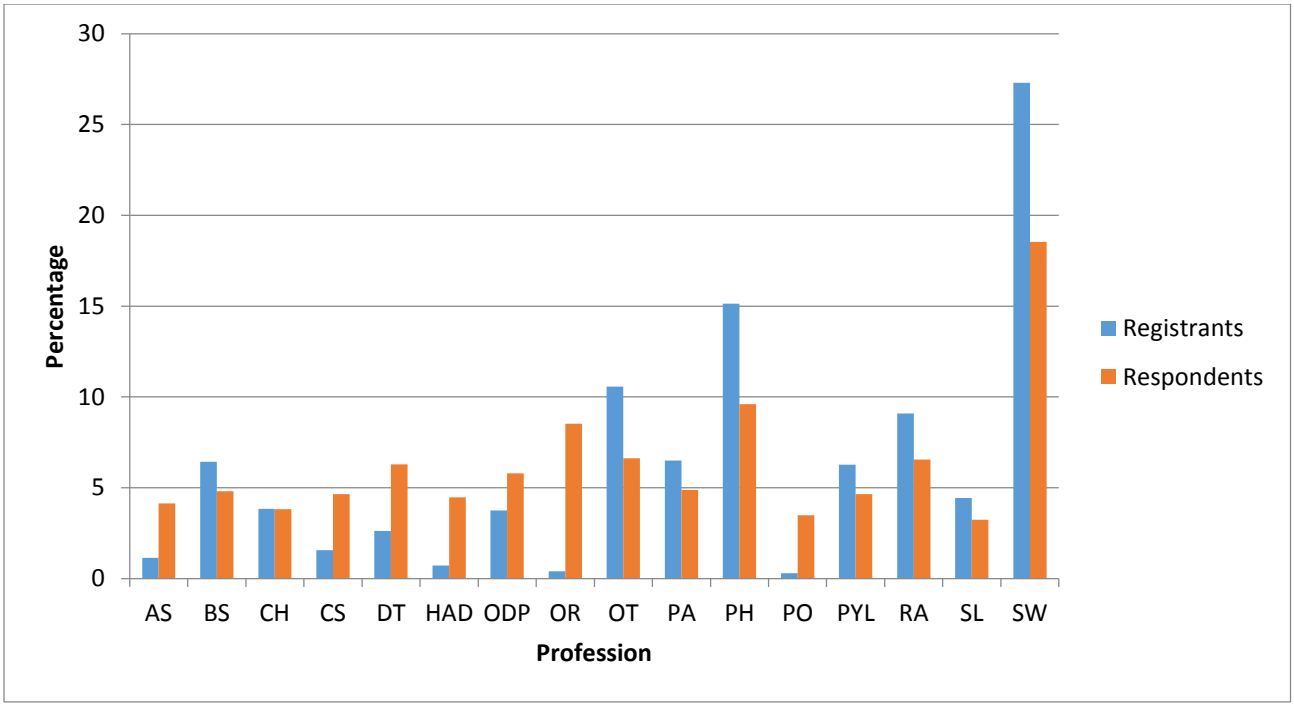


Figure 8 Representativeness of the sample by profession with the percentage of each sample and overall registered professionals, respectively making up the two groups. Where the red and blue bars are roughly equal proportional representativeness was achieved.

Table 11 Key to the abbreviations for the professions

Profession	Abbreviation
Arts Therapist	AS
Biomedical Scientist	BS
Chiropodists / Podiatrist	CH
Clinical Scientist	CS
Dietitian	DT
Hearing Aid Dispenser	HAD
Occupational Therapist	OT
Operating Department Practitioner	ODP
Orthoptist	OR
Paramedic	PA
Physiotherapist	PH
Practitioner Psychologist	PYL
Prosthetist / Orthotist	PO
Radiographer	RA
Social Worker	SW
Speech and Language Therapist	SL

Table 12 Results of a logistic regression predicting the odds ratio of being from a specific profession (versus from any other profession) for a respondent versus being a registrant in general.

Professional group	Abbrev.	Odds Ratio	P (to 2 dp)	Lower 95% confidence interval for OR	Upper 95% confidence interval for OR
Arts Therapist	AS	3.77	<0.0001	2.83	5.01
Biomedical Scientist	BS	0.73	0.022	0.56	0.96
Chiropodists / Podiatrist	CH	0.99	0.97	0.74	1.34
Clinical Scientist	CS	3.06	<0.0001	2.34	4.01
Dietitian	DT	2.49	<0.0001	1.97	3.15
Hearing Aid Dispenser	HAD	6.55	<0.0001	4.97	8.63
Operating Department Practitioner	ODP	1.58	<0.0001	1.24	2.02
Orthoptist	OR	22.97	<0.0001	18.64	28.30
Occupational Therapist	OT	0.60	<0.0001	0.48	0.75
Paramedic	PA	0.74	0.023	0.57	0.96
Physiotherapist	PH	0.60	<0.0001	0.49	0.72
Prosthetist / Orthoptist	PO	12.24	<0.0001	8.94	16.75
Practitioner Psychologist	PYL	0.73	0.02	0.56	0.95
Radiographer	RA	0.70	0.002	0.56	0.88
Speech and Language Therapist	SL	0.72	0.044	0.52	0.99
Social Worker	SW	0.61	<0.0001	0.52	0.70

Attitudes towards CPD and impact on patient benefit

This section is focused on the types of CPD activities and whether they lead to benefit.

Question 14: How much do you agree/disagree that your CPD activities led to patient/service user benefit (including improved safety, service or experience)?

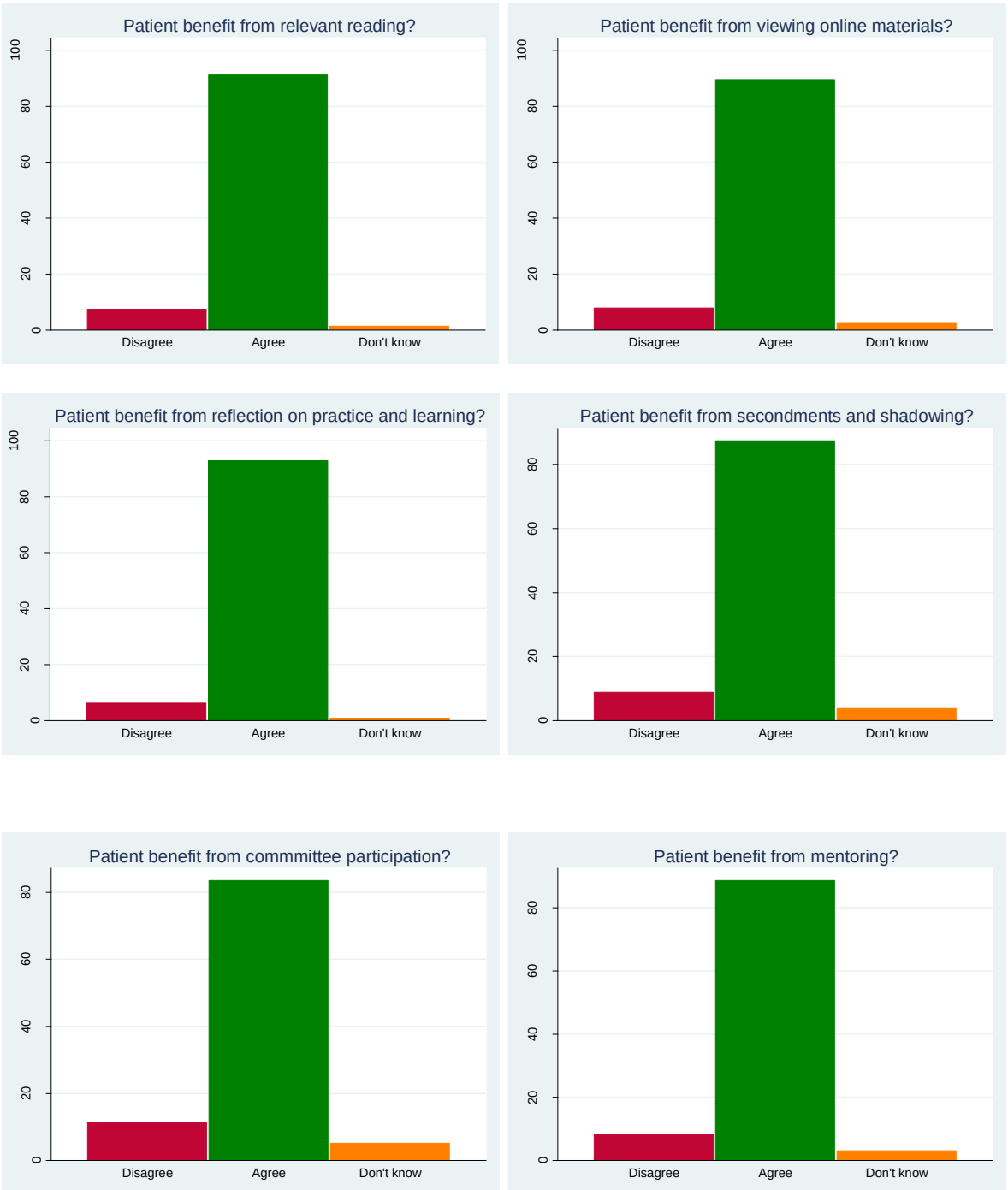
Table 13 Responses (count [n] and percentages) of respondents to question asking which CPD activities they felt let to patient/service-user benefit.

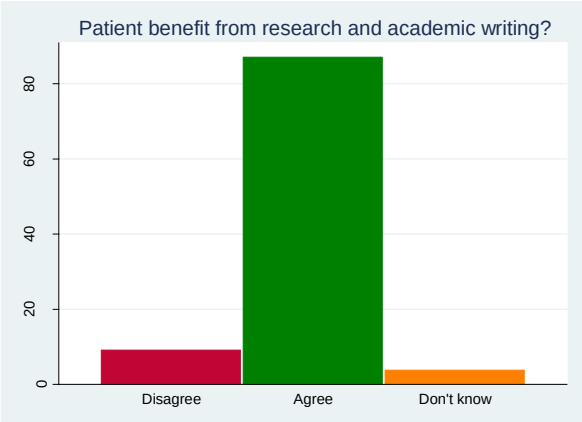
Answer Options	*Strongly disagree*		*Disagree*		*Agree*		*Strongly agree*		*Don't know*		*Rating Average*	*Response Count*
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*		
Self-study: reading relevant articles, books, and policy documents	45	4.7	26	2.7	471	49.3	400	41.8	14	1.5	3.33	956
Self-study: viewing on line materials (excluding distance learning, e-learning modules)	34	4.5	25	3.3	391	52.1	281	37.4	20	2.7	3.30	751
Self-study: reflection on practice, learning from experience, developing specialist skills	35	4.2	17	2.1	289	34.9	481	58.0	7	0.8	3.49	829
Additional roles: secondments, work shadowing etc.	19	6.0	9	2.8	144	45.4	133	42.0	12	3.8	3.35	317
Additional roles: representative on a committee, involvement with a professional body etc.	17	4.8	23	6.5	167	47.4	127	36.1	18	5.1	3.30	352
Additional roles: mentor, coach, tutor, teacher,	27	3.8	31	4.4	283	40.2	341	48.4	22	3.1	3.43	704

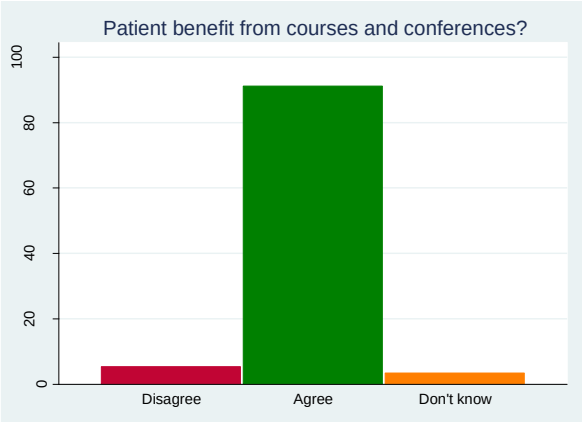
supervisor, assessor, presenter												
Additional roles: research, project work, writing, discussing or reviewing articles	11	3.5	18	5.7	144	45.4	132	41.6	12	3.8	3.37	317
Formal education: courses, conferences, seminars, workshops, learning activities	27	3.6	14	1.9	306	40.6	380	50.5	26	3.5	3.48	753
Formal education: distance learning, e-learning modules	14	4.2	30	9.1	164	49.5	108	32.6	15	4.5	3.24	331
Formal education: quality improvement activity, in-service training	19	3.8	20	4.0	207	41.2	239	47.5	18	3.6	3.43	503
Formal education: higher education qualifications	6	3.9	8	5.2	57	37.0	75	48.7	8	5.2	3.46	154
Third party: reflection on feedback from appraisal	14	4.1	21	6.2	181	53.1	113	33.1	12	3.5	3.26	341
Third party: reflection on multi-source feedback (360 degree feedback)	7	6.6	9	8.5	56	52.8	29	27.4	5	4.7	3.15	106
Third party :reflection on patient feedback e.g. audit of service users, letters or cards from patients	11	3.6	12	3.9	143	46.4	127	41.2	15	4.9	3.40	308
Third party: reflection following complaints / critical incidents	12	5.1	11	4.6	87	36.7	115	48.5	12	5.1	3.44	237

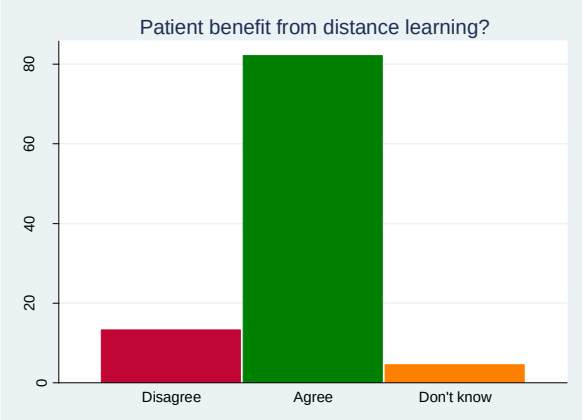
In order to counter potential ‘central’ or ‘extreme’ scoring tendencies the responses from the previous question were then collapsed and thus dichotomised into agree/disagree categories. The responses are shown in Figure 9.

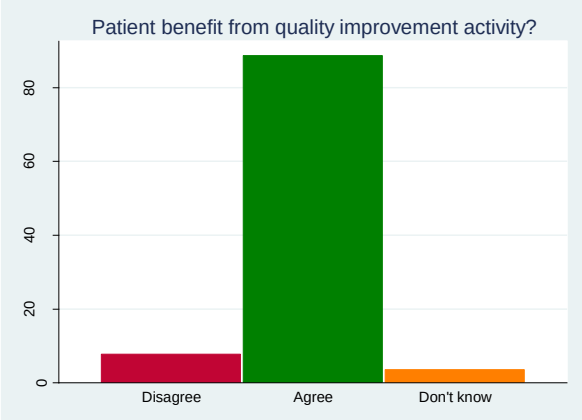
Figure 9 Graphs showing patient benefit from relevant reading, viewing online materials. Reflection on practice and learning, secondments and shadowing, committee participation, mentoring, research and academic writing, courses and conferences, distance learning, quality improvement activity, higher education, appraisal feedback, multi-source feedback, reflection on patient feedback, and reflection on complaints.

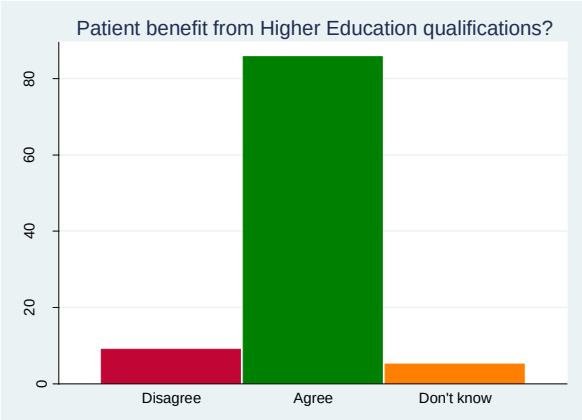


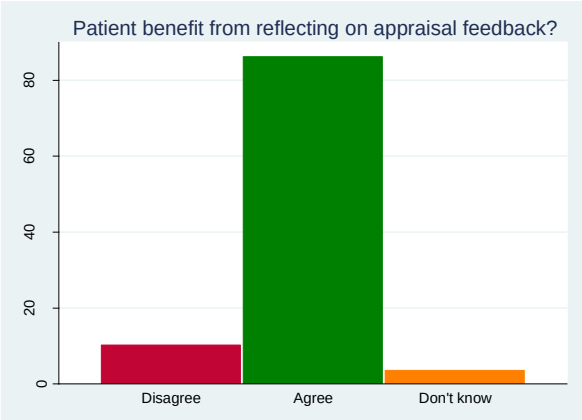

Patient benefit from research and academic writing?
0
20
40
60
80
Disagree
Agree
Don't know

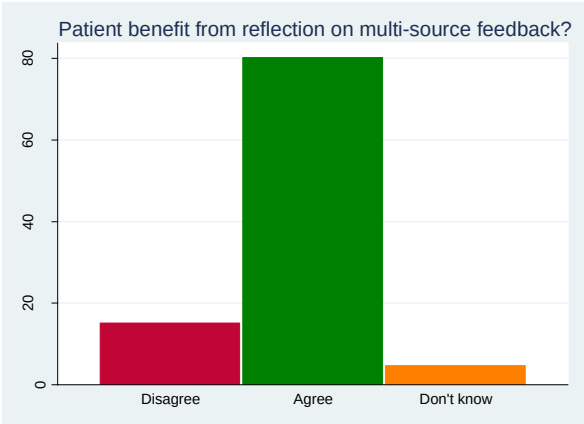

Patient benefit from courses and conferences?
0
20
40
60
80
100
Disagree
Agree
Don't know

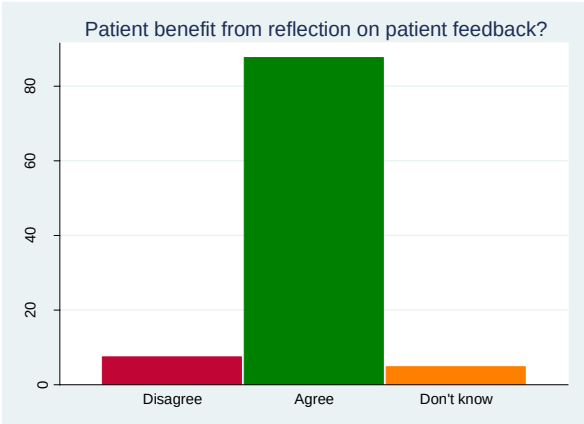

Patient benefit from distance learning?
0
20
40
60
80
Disagree
Agree
Don't know

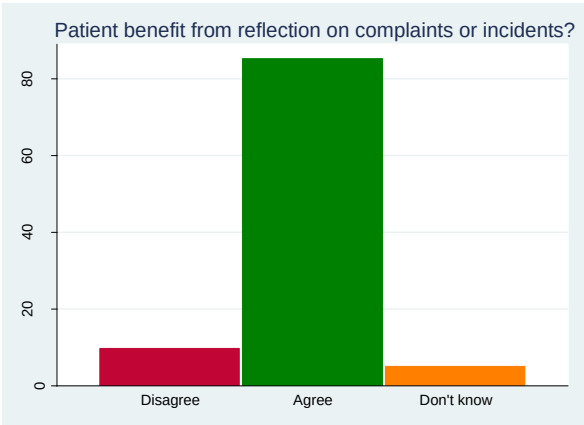

Patient benefit from quality improvement activity?
0
20
40
60
80
Disagree
Agree
Don't know


Patient benefit from Higher Education qualifications?
0
20
40
60
80
Disagree
Agree
Don't know


Patient benefit from reflecting on appraisal feedback?
0
20
40
60
80
Disagree
Agree
Don't know







As can be seen from the figures above, registrants who responded to the survey, in general, agreed that most CPD activities led to patient benefit. No single type of activity was identified as being more beneficial to patient benefit. There were few differences seen across the professions. However, a relatively higher proportion of Occupational Therapists, Operating Department Practitioners, Prosthetists, Physiotherapists and Social Workers tended to disagree more often than other professions that some CPD activities led to patient benefit. Yet, these differences were small and the vast majority still ‘agreed’ with the statements in this section of the survey.

Attitudes towards the HCPC standards and CPD

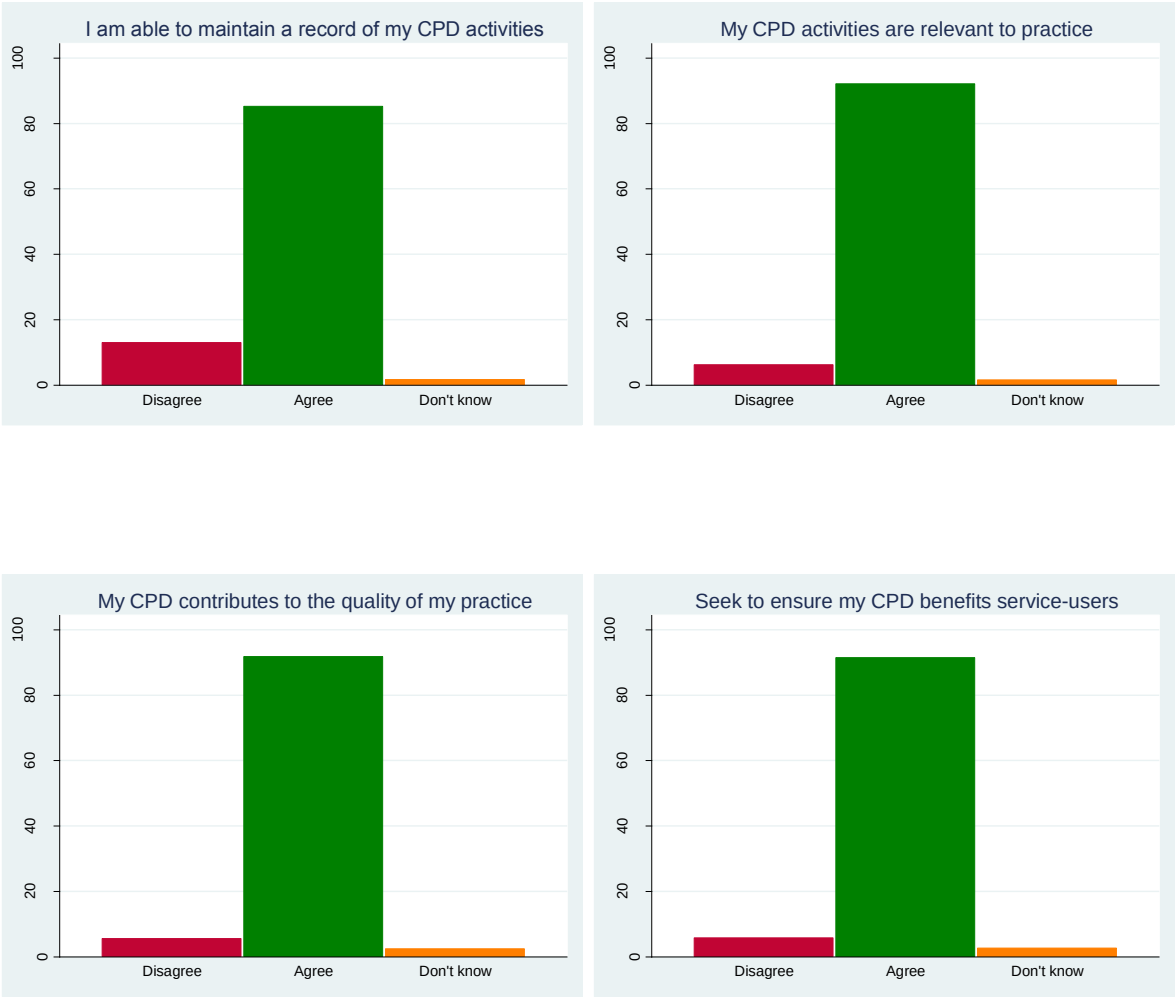
The respondents were asked if they could apply the HCPC standards to their CPD activities.

Question 17: Ability to apply the HCPC standards to CPD activities.

Table 14 Results of responses (counts with (%)) of registrants to whether they were able to apply the standards set by the HCPC to their CPD.

Answer Options	Strongly disagree	Disagree	Agree	Strongly agree	Don't know	Rating Average	Response Count
Standard 1: maintain a continuous, up-to-date and accurate record of CPD activities	28 (3.0%)	92 (10.0%)	496 (54.0%)	287 (31.2%)	16 (1.7%)	3.19	919
Standard 2: demonstrate that CPD activities are a mixture of learning activities relevant to practice	15 (1.6%)	42 (4.6%)	516 (56.3%)	329 (35.9%)	15 (1.6%)	3.31	917
Standard 3: seek to ensure that CPD has contributed to the quality of practice and service delivery	16 (1.7%)	36 (3.9%)	499 (54.4%)	344 (37.5%)	23 (2.5%)	3.35	918
Standard 4: seek to ensure that CPD benefits the service user	15 (1.6%)	39 (4.2%)	474 (51.5%)	368 (40.0%)	25 (2.7%)	3.38	921
						answered question	**921**
						skipped question	**287**

Figure 10 Agreement with applying HCPC standards to CPD activities



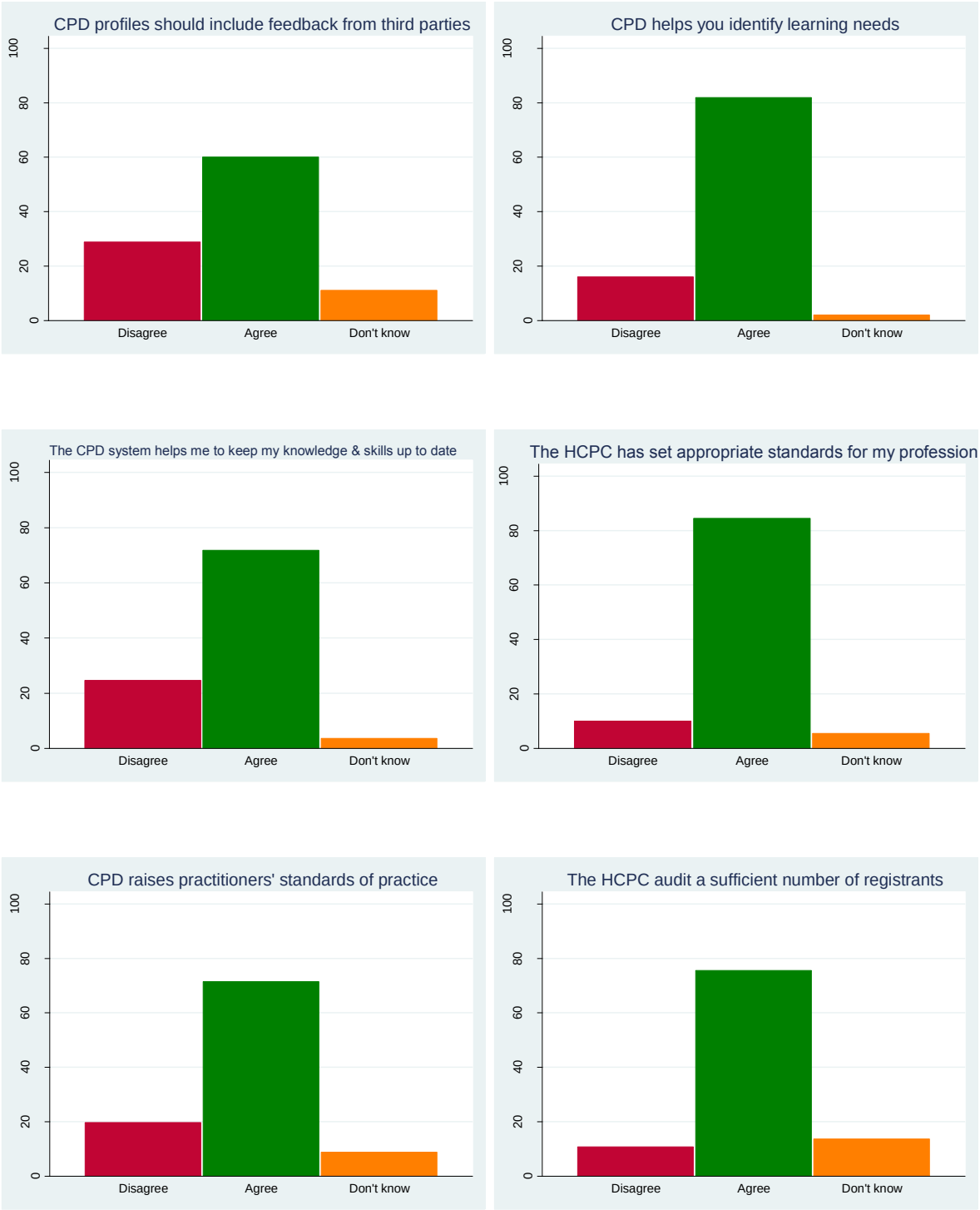
The tables and figures demonstrate that generally respondents agreed that they could apply the HCPC standards to their CPD. The lowest level of agreement was for Standard 1, perhaps highlighting difficulties with keeping a continuous record.

Question 18: How much do you agree with the following statements?
The results are depicted in Table 15 below. In addition the responses, dichotomised into *agree/disagree* are visually displayed in Figure 11.

Table 15 Results from respondents asked "How much do you agree with the following statements?"

Answer Options	Strongly disagree		Disagree		Agree		Strongly agree		Don't know		Rating Average	Response Count
	n	%	n	%	n	%	n	%	n	%		
CPD profiles should include feedback from third parties	49	5.4	214	23.5	410	45.1	136	14.9	101	11.1	3.03	910
CPD helps you identify learning needs	14	1.5	132	14.5	540	59.3	205	22.5	19	2.1	3.09	910
The current CPD system helps keep my knowledge/skills up to date	31	3.4	193	21.2	497	54.6	156	17.1	33	3.6	2.96	910
The HCPC has set appropriate standards for my profession	21	2.3	70	7.7	578	63.5	191	21.0	50	5.5	3.20	910
The HCPC requirements of CPD raises practitioners standards of practice	33	3.6	146	16.0	468	51.4	182	20.0	81	8.9	3.15	910
The HCPC audit a sufficient number of registrants (2.5%)	23	2.5	75	8.2	456	50.1	231	25.4	125	13.7	3.40	910

Figure 11 Agreement with statements about CPD profiles



The attitudinal questions demonstrated that respondents generally agreed with the following statements: CPD profiles should *include feedback from third parties*, *CPD helps you identify learning needs*, *CPD helps me to keep my knowledge and skills up to date*, *the HCPC has set appropriate standards for my profession*, *CPD raises practitioners' standards of practice*, and the *HCPC audit a sufficient number of registrants*. However, it should be noted that

although the majority of respondents agreed with the statements, a sizable minority (approximately 20-30%) disagreed with the statements relating to *including feedback from third parties, helping to keep knowledge up to date*, and *raising practitioners' standards of practice*. When a breakdown of responses were analysed by type of employer (e.g. NHS, Independent etc.) it was noted that those registrants reporting to be university employed tended to be more divided than others in their views on the usefulness of third party feedback; roughly half stated they *agreed* that CPD profiles should include feedback from third parties whilst roughly half *disagreed* with this statement. This is in contrast to other types of employees, who, whilst still divided to some extent, more often tended to agree with this statement.

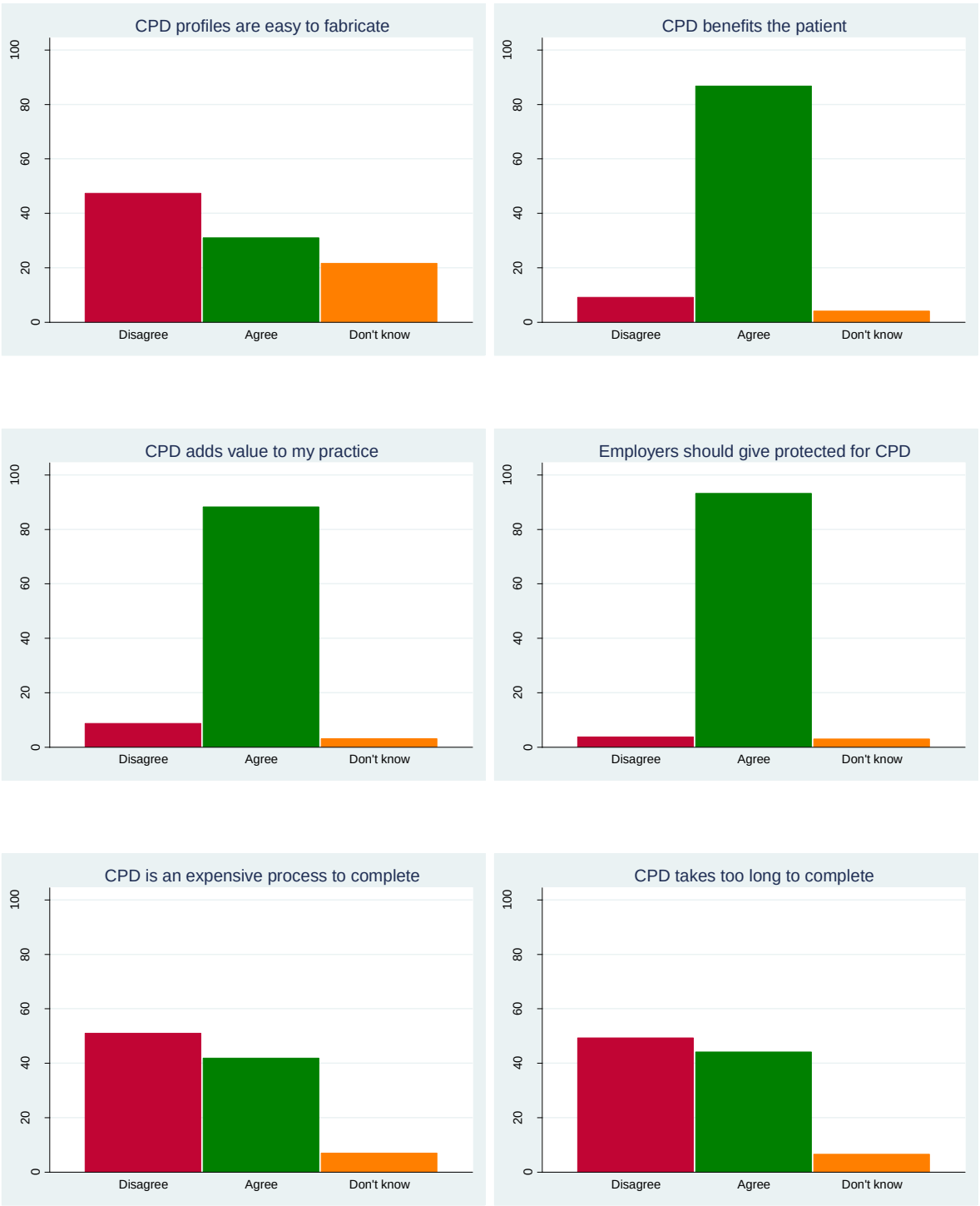
Question 19: How much do you agree with the following statements [relating to CPD]?

This series of survey questions evaluated overall perceptions of registrants to the CPD process. The overall responses are summarised in Table 16 below. The attitudes are dichotomised into agree/disagree and presented in Figure 12 below.

Table 16 Registrants responses (counts and percentages) to Q19 "How much do you agree with the following statements?"

Answer Options	Strongly disagree		Disagree		Agree		Strongly agree		Don't know		Rating Average	Response Count
	n	%	n	%	n	%	n	%	n	%	n	%
CPD records / profiles are easy to fabricate	51	5.7	374	41.7	226	25.2	52	5.8	194	21.6	2.96	897
CPD benefits the service user / patient	15	1.7	67	7.5	520	58.0	258	28.8	37	4.1	3.26	897
CPD adds value to my practice	11	1.2	67	7.5	491	54.7	300	33.4	28	3.1	3.30	897
Employers should give protected time to carry out CPD activities	7	0.8	27	3.0	245	27.3	591	65.9	27	3.0	3.67	897
CPD is an expensive (£) process for me to complete	47	5.7	411	41.7	207	23.1	169	18.8	63	7.0	2.77	897
CPD takes too long to complete	48	1.7	394	7.5	275	30.7	121	13.5	59	6.6	2.72	897
answered question												897
skipped question												311

Figure 12 Agreement with items from question 19



Approximately 30% thought that CPD profiles were easy to fabricate with a further 20% unsure across all professional groups. Registrants generally agreed that CPD benefitted patients, added value to their practice and that employers should give protected time for CPD. However, there was a greater split of opinion regarding the costs of CPD, in terms of financial and time resources required.

Regarding costs; *Art Therapists*, *Chiropodists*, *Paramedics*, *Physiotherapists* and *Psychologists* tended to agree that CPD was expensive, in contrast to the other groups. Again, opinion was split over whether the CPD process was too lengthy, with *Biomedical Scientists*, *ODPs*, *Physiotherapists* and *Radiographers* tending to *agree* it was.

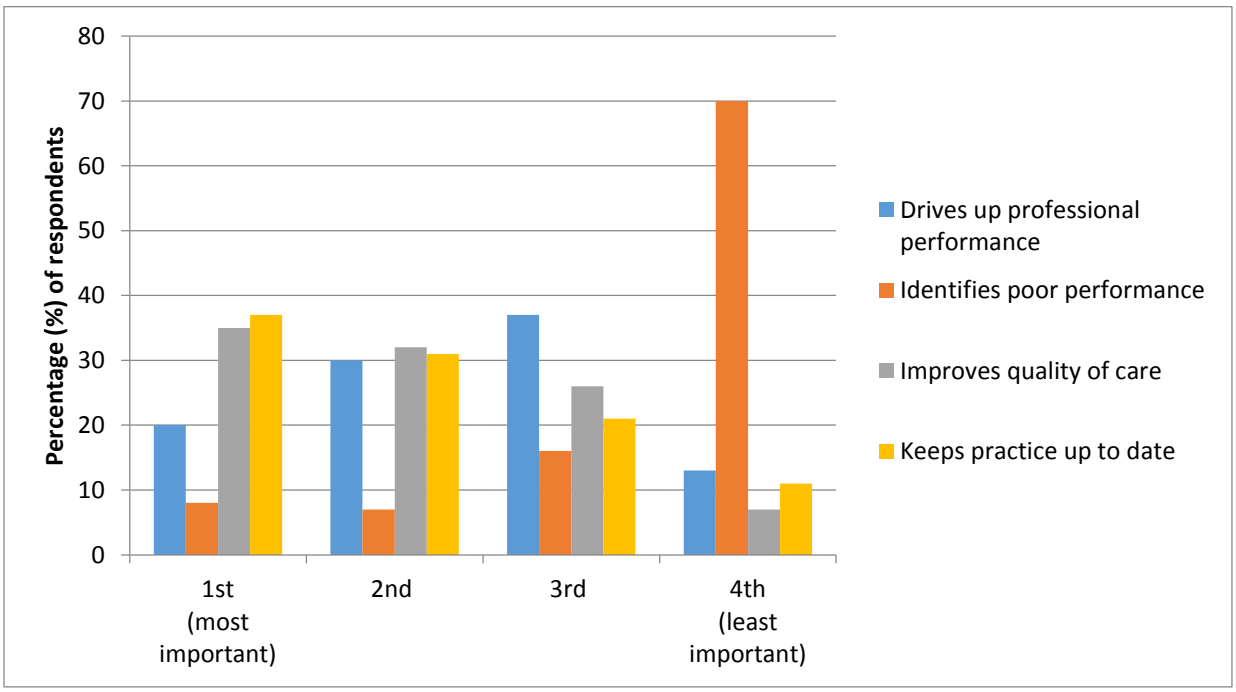
Question 20: Ranking the relative importance of CPD

Respondents were asked to rank differing potential benefits of CPD in perceived order of importance (1 being *most* important and 4 being *least* important). The results are depicted in Table 17 and the bar chart in Figure 13.

Table 17 Rank the following in order of importance. Percentages for each response category for each ranking (e.g. 1st place etc.) are shown in parenthesis.

Answer Options	1 (%)	2 (%)	3 (%)	4 (%)	Rating Average	Response Count
Drives up professional performance	166 (20)	253 (30)	313 (37)	105 (13)	2.43	837
Identifies poor professional performance	67 (8)	57 (7)	131 (16)	582 (70)	3.47	837
Improves quality of patient care	292 (35)	271 (32)	215 (26)	59 (7)	2.05	837
Keeps your practice up to date	312 (37)	256 (31)	178 (21)	91 (11)	2.06	837
					answered question	**837**
					skipped question	**371**

Figure 13 Average rankings given by the respondents for differing potential benefits of CPD

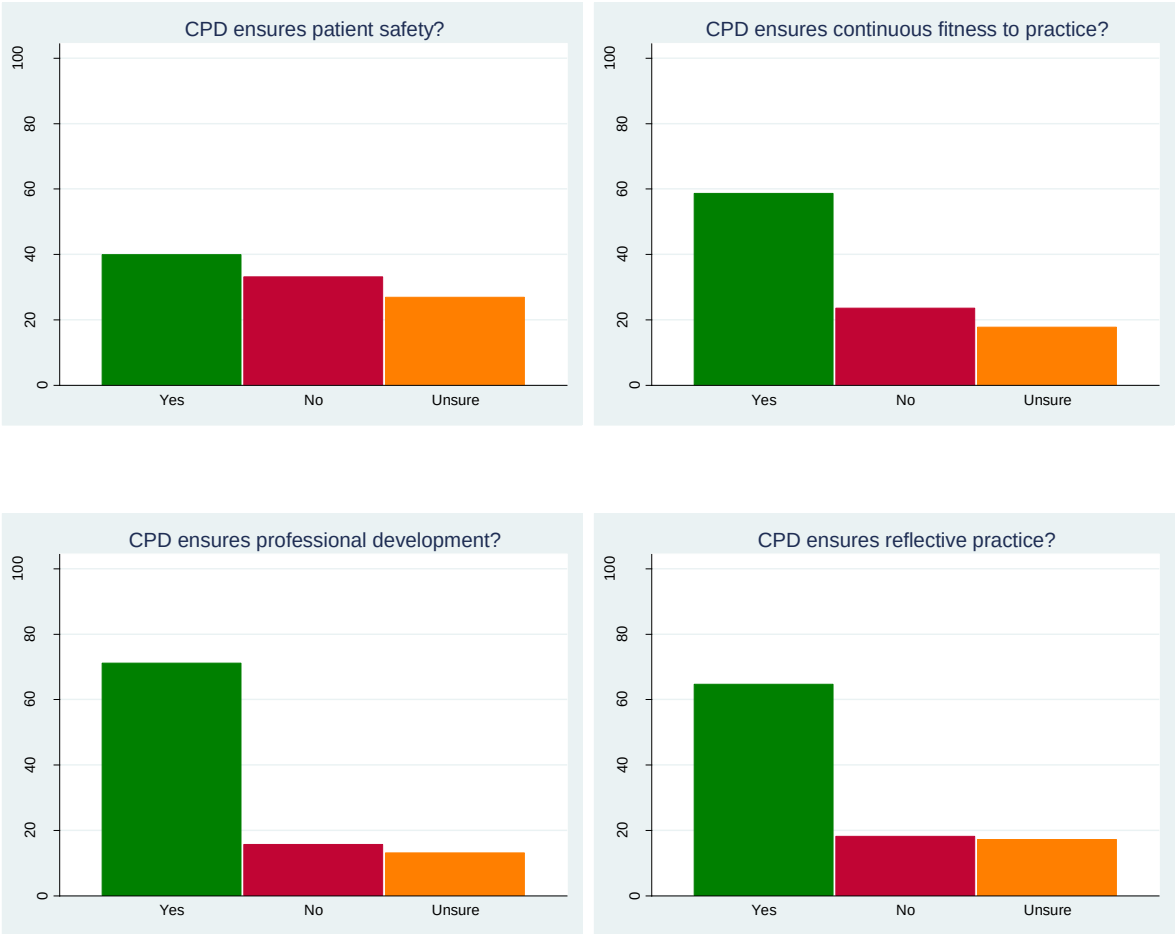


As can be seen from the results, respondents tended to rank *'identifies poor professional performance*' as the least important and *'keeps practice up to date*' and *'improves quality of care*' as most important.

Question 21: Attitudes towards what CPD ensures

This question asked whether respondents felt that CPD could ensure four aspects of professional practice. The results are depicted in Figure 14 below. As can be seen respondents generally agreed that CPD could ensure *continuous fitness to practice*, *reflective practice* and *professional development* but were more divided over whether it would contribute to *patient safety*. Indeed, most *Social Workers* expressed a view felt that CPD did not contribute to patient/service user safety (breakdown by profession not shown).

Figure 14 Attitudes towards the purpose of CPD



Question 22: Have you received any training in the past two years on patient / service user safety?

The responses are depicted below in Table 18. As can be seen, most reported having had training relating to patient safety.

Table 18 Proportion of respondents reporting having had training related to service-user safety.

Answer Options	Response Percent	Response Count
Yes	67.7%	565
No	30.1%	251
Other (please specify)	2.2%	18
answered question		834
skipped question		374

Question 23: If yes, was the training undertaken as a result of the HCPC CPD requirements?

As can be seen in Table 19 below, the minority of respondents who reported undergoing safety training stated that this was as a result of the HCPC CPD requirements.

Table 19 Responses to the question "was the [safety] the training undertaken as a result of the HCPC CPD requirements?

Answer Options	Response Percent	Response Count
Yes	11.1%	76
No	70.7%	485
Unsure	18.2%	125
answered question		686
skipped question		522

Question 24: How much protected time are you given by your employer to do CPD?

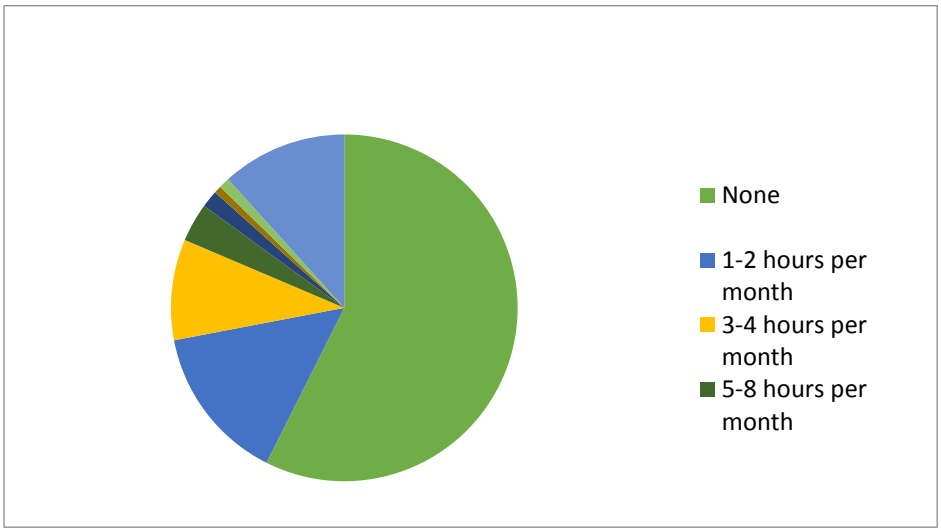
The results for these responses are depicted in Table 20 and

Figure 15 below. As can be seen, the majority of respondents (n=475, 57.4%) stated '*none*'.

Table 20 Responses to question "much protected time are you given by your employer to do CPD"

Answer Options	Response Percent	Response Count
None	57.4%	475
1-2 hours per month	14.6%	121
3-4 hours per month	9.4%	78
5-8 hours per month	3.6%	30
9-12 hours per month	1.6%	13
13-15 hours per month	0.7%	6
16 hours or more	1.0%	8
Other (please specify)	11.7%	97
answered question		828
skipped question		380

Figure 15 The reported protected time given by employers to do CPD



Question 25: Have you ever been an assessor for the HCPC?

Six respondents stated *'yes-current'*, 10 *'yes-previously'* and 812 said '*no*'.

Experiences of the audit process

Question 26: Has the HCPC ever contacted you to audit your CPD?

Of the respondents, 83 said '*yes*', 728 said '*no*', whilst 17 stated '*unsure*'.

Question 27: In which year were you audited (if applicable)?

Of the 83 respondents who reported a previous audit, 78 went on to give further details. The dates of audits are depicted in Table 21 below. The largest proportion had been audited in 2015 (n=24, 30.08%).

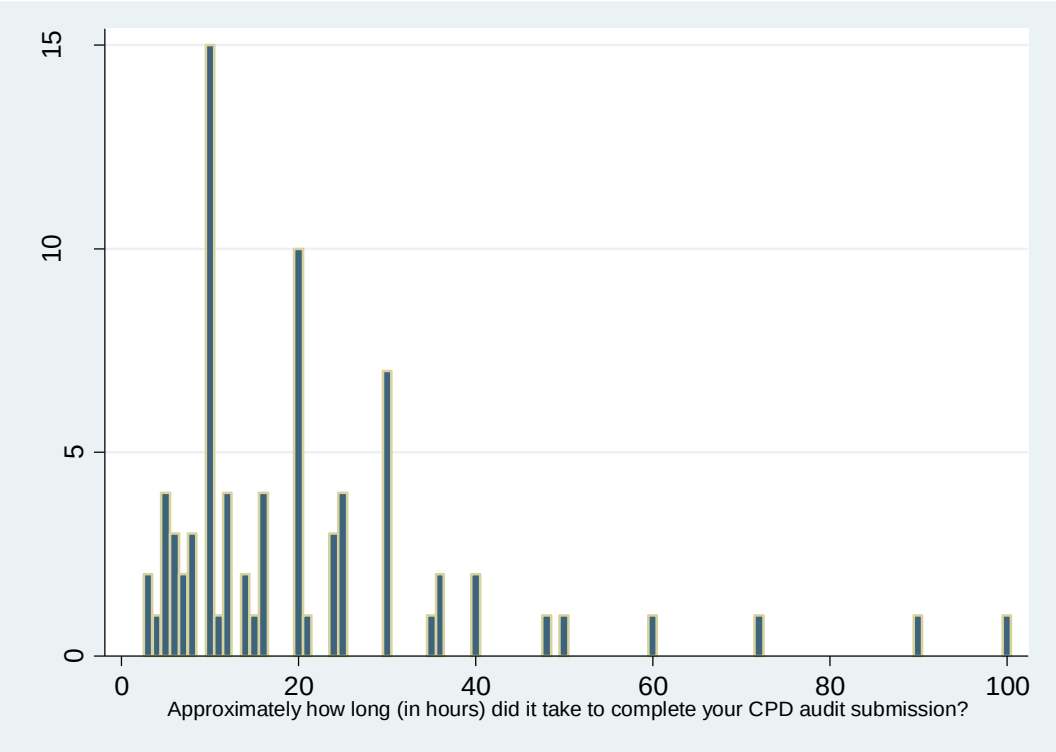
Table 21 Year of audit

Answer Options	Response Percent	Response Count
2016	5.1%	4
2015	30.8%	24
2014	11.5%	9
2013	10.3%	8
2012	15.4%	12
2011	10.3%	8
2010	6.4%	5
2009	5.1%	4
2008	1.3%	1
2007	1.3%	1
2006	2.6%	2

Question 28: Approximately how long (in hours) did it take to complete your CPD audit submission?

The 78 respondents who reported having been audited answered this question. The mean time reported was 20 hrs and 40 minutes (SD 17.92 hrs). The histogram below depicts the distribution of reported hours spent.

Figure 16 Histogram depicting the distribution of reported hours spent on the CPD audit (n=78)



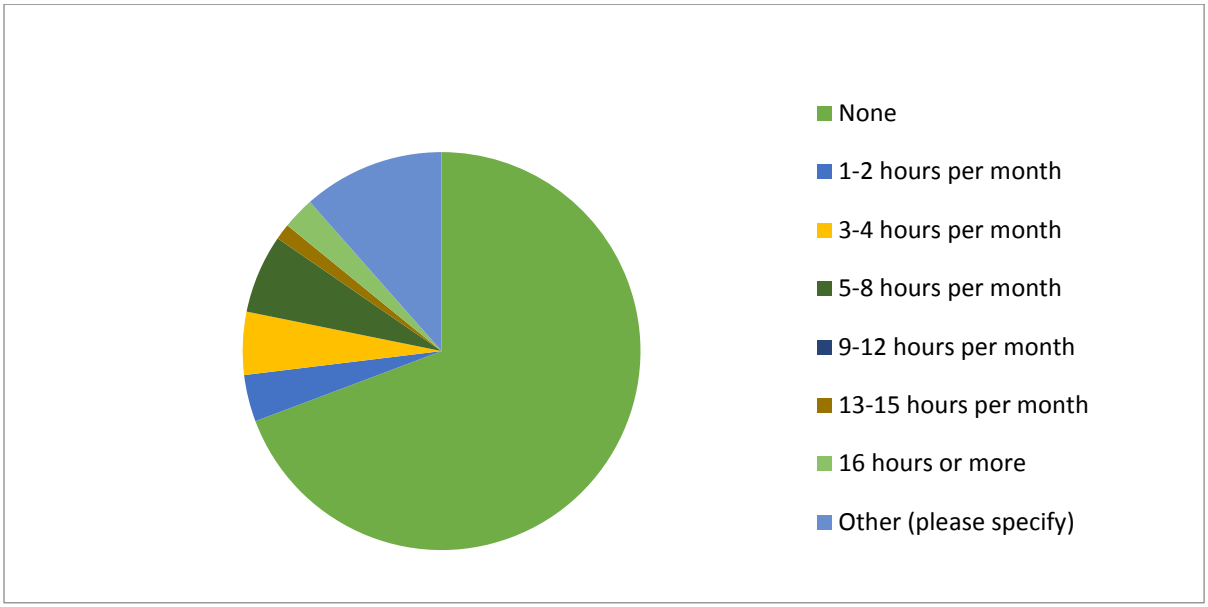
Question 29: How much protected time were you given by your employer to complete your CPD audit submission?

Seventy-eight respondents answered this question. The results are shown in Table 22 and Figure 17 below. The overwhelming majority received no protected time from their employer to complete their CPD audit submission (n= 54, 69.2%).

Table 22 Reports of how much protected time respondents were given by their employers to complete a CPD audit submission

Answer Options	Response Percent	Response Count
None	69.2%	54
1-2 hours per month	3.8%	3
3-4 hours per month	5.1%	4
5-8 hours per month	6.4%	5
9-12 hours per month	0.0%	0
13-15 hours per month	1.3%	1
16 hours or more	2.6%	2
Other (please specify)	11.5%	9
	answered question	78
	skipped question	1130

Figure 17 Reports of how much protected time respondents were given by their employers to complete a CPD audit submission



Question 30: Were you able to use this protected time for completing your audit submission?

The responses to this question are shown in Table 23 below. Of those that responded yes/no 62% (18/29) said '*yes*', 38% (11/29) '*no*'.

Table 23 Protected time for audit submission

Answer Options	Response Percent	Response Count
Yes	24.7%	18
No	15.1%	11
N/a	60.3%	44
	answered question	73
	skipped question	1135

Question 31: Outcome from audit

Table 24 below shows the reported outcomes from the 78 respondents who said they had been audited. As can be seen most were accepted without further information being requested.

Table 24 Respondent responses (n=78) to the question "What was the outcome of your audit?"

Answer Options	Response Percent	Response Count
Accepted first time	83.3%	65
Accepted after providing further information	3.8%	3
Asked for further information	1.3%	1

Not received feedback yet	10.3%	8
Other (please specify)	1.3%	1

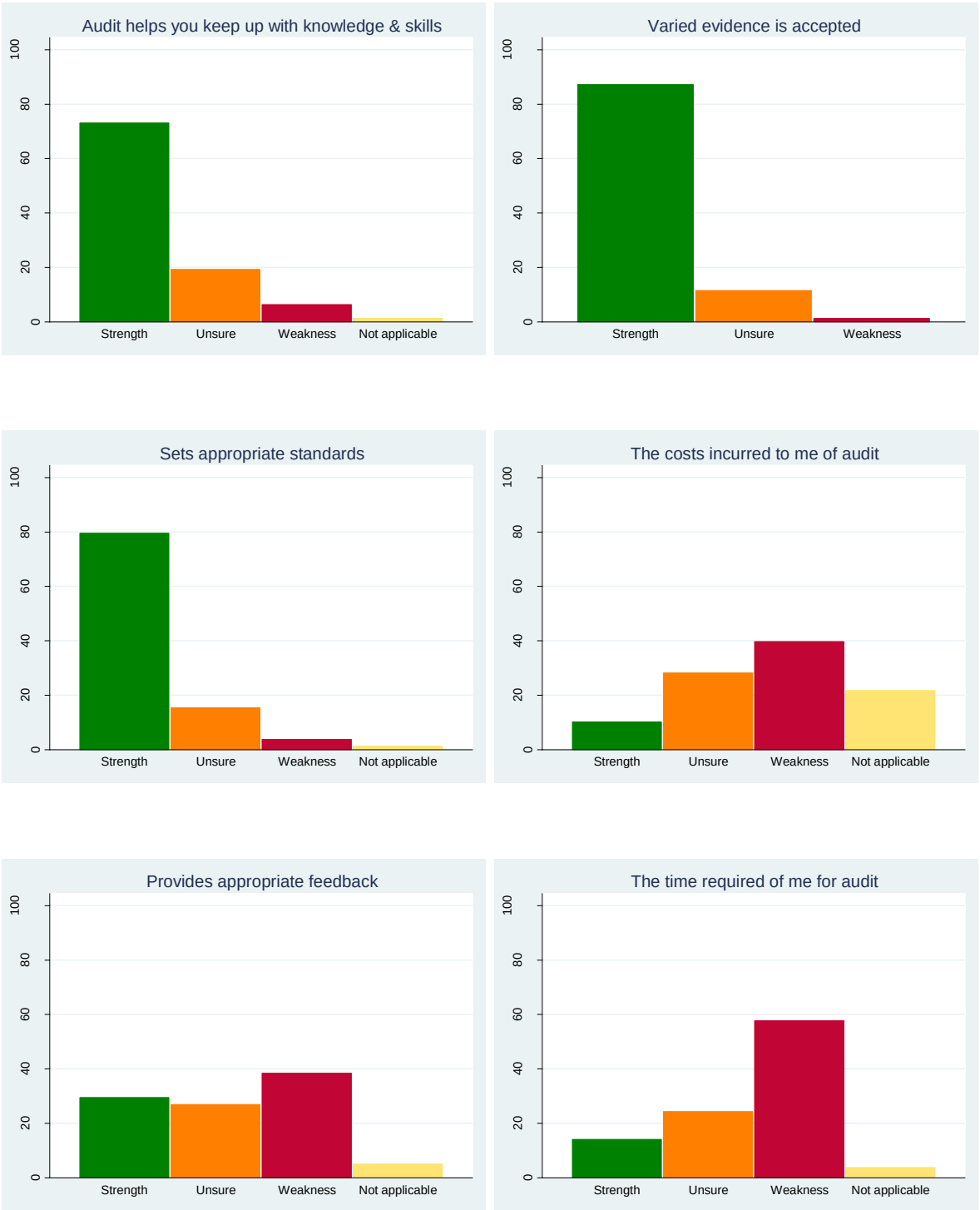
Question 32: Which do you think are strengths and weaknesses of the HCPC audit system?

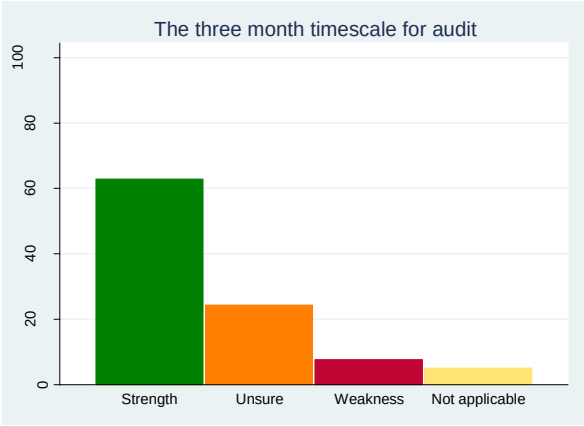
The responses to question 32 are depicted below in Table 25. As the counts were below 100 percentages are not shown in the Table. However the proportion, as percentages, are depicted in Figure 18 below.

Table 25 Respondents' responses to the question "Please indicate whether you think the following statements are strengths or weaknesses of the audit system?"

Answer Options	Strength		Unsure		Weakness		N/a		Response Count
	n	%	n	%	n	%	n	%	
Helps you to keep knowledge and skills up to date	57	73.1	15	19.2	5	6.4	1	1.3	78
Varied range of evidence is accepted	68	87.2	9	11.5	2	2.6	1	1.3	78
Sets appropriate standards for my profession	62	79.5	12	15.4	3	3.8	1	1.3	78
Provides appropriate feedback on the outcome of the audit	23	29.5	22	28.2	30	38.5	5	6.4	78
The cost (£) incurred by me to complete the audit	8	10.3	24	30.8	31	39.7	18	23.1	78
The time required by me to complete the audit	11	14.1	19	24.4	45	57.7	3	3.8	78
The length of time permitted by HCPC (3 months) for me to complete and submit the audit	49	62.8	19	24.4	7	9.0	4	5.1	78
answered question									**78**
skipped question									**1130**

Figure 18 Graphs demonstrating the perceived strengths and weaknesses of the audit system





As can be seen from the bar charts in Figure 18 the ability of the CPD audit to encourage registrants to keep their skills and knowledge up to date was viewed as a relative strength of the system. Likewise the varied range of evidence accepted by the HCPC, the standards set and the three month time scale for audit were viewed positively, as relative strengths of the approach. Conversely, the financial and time costs to registrants were more likely to be viewed as a weakness, as was the feedback from the process. When a breakdown by employment type (e.g. NHS, Independent etc.) was assessed it was observed that the Local Authority/Council employed registrants more often saw the time required for CPD audit as a *strength* more often than a weakness or neither, compared to other types of employee. Also, a higher proportion of Council employees saw the 'feedback' as a strength compared to a weakness, compared to other categories of registrant.

Qualitative comments from the open questions at the end of the Survey

This section focuses on quotes from that illustrate direct improvement to patient service. At the end of the online survey registrants were invited to respond to an optional question.

Q33. Please provide an example of one CPD activity you did, clearly describing how it led to service user/patient benefit? (Including improved care, patient experience, and safety).

We received entries from 649 registrants who gave examples on how a CPD they did led to patient benefit. Below are a selection of responses. These examples provide evidence of engagement with Standard 4.

Patient impact was coded as:

1) Patient experience;
2) Clinical effectiveness; and,
3) Patient safety.

Examples of themes are presented below.

Patient experience

Involving patients and other professionals in CPD and service improvements seemed to be a key feature of activities that were reported to have resulted in improved patient experience. Some key points are emboldened within the quotes given below.

> ***A departmental review of information leaflets given to patients*** *- looking at examples from other departments. As a result of this,* ***our information was redesigned*** *to allow it to be used in a number of formats, e.g. written information including large print leaflets, autism friendly information, and online access to documents.* ***Patient feedback was obtained*** *from this, and adaptations made to the information.* ***Patient experience was enhanced as a result, and safety was increased*** *as updates were made to contact details etc.* ***so patients can contact us more easily for queries.*** (Female Orthoptist, band 7)
>
> *Review of current outpatient service within specialty, then* ***further scoping exercise with both patient and other service users to help inform changes needed****. From results met with service users and planned service redesign to help make* ***outpatient service more patient centred*** *to enable patients to have planned sessions and time*

> *to offer more holistic approach to patient care process.* ***This also resulted in reduction in DNA[4] rates and greater patient satisfaction with service provided on repeat scoping****.* (Female NHS dietician, band 6)
>
> *I participated in a* ***multi-professional focus group*** *which was looking at how to improve services for the patient service user group.* ***Service user/patients were consulted*** *on outcomes and I am now part of a working group affecting change in process*. (Female NHS social worker, band 6)

In these situations, patient consultation and feedback was a crucial part of the changes designed and implemented which led to patient benefit. The specialities here are diverse, ranging from the clinical, nutritional and the social. It is noteworthy that in one case, a multidisciplinary group were instrumental.

> *A project for prostate cancer patients.* ***Prostate cancer patients given a presentation on their radiotherapy treatment****. In the presentation we included information on CT scan appointment, radiotherapy treatment, side effects of radiotherapy. This benefitted the service user as it prepared them and they knew what to expect from their radiotherapy treatment.* ***Nervous and anxious patients were put at ease****. This meant improved patient experience.* (Female radiographer, band 6)
>
> *Took over the Orthoptic led Stroke service and* ***made a protocol for all Orthoptists to work*** *with to ensure all patients had the correct tests completed, referrals were appropriate and* ***ensured equity of care for all patients and staff****.* (Female Orthoptist, band 7)
>
> *I undertook* ***Makaton training*** *as I work with* ***disabled children who sometimes use alternative ways of communication to*** *enhance my ability to communicate with the children. I have been* ***able to use this training with a young person*** *who is hearing impaired and uses sign language to communicate.* (Female social services social worker, band 8a)

Clinical effectiveness

Many of the accounts of CPD that were reported to have improved clinical effectiveness involved a clear focus on applied skills (as opposed to purely knowledge). At times this was

[4] DNA = 'did not attend' an appointment

linked to shadowing or practice. Audit of practice could help confirm any improvements in care or outcomes.

> ***RCT Co-Investigator*** *for* ***Enhanced Physiotherapy Trial for Critical Care****. Improved patient treatment times and interventions in relation to patient outcome.* (Female physiotherapist, band 8a)

I took part in ***Spinal training provided by Orthopaedic Physiotherapy Practitioners*** *covering use of pain relief, assessment and treatment techniques and case studies. The outcome was that* ***I felt more confident in advising patients*** *on pain relief and felt more* ***confident when discussing medication with GP's****. The refresher of assessment techniques also streamlined my own assessments making them more effective.* (Female physiotherapist, band 7)

> ***Self-study*** *an* ***online course*** *on management of* ***visual defects after stroke****, learnt additional management practices to offer the patients including coloured overlays for reading problems. Read relevant* ***current journal articles*** *to compare and confirm how effective management practices are for the patients.* ***Work shadowed a colleague*** *on use of coloured filters. Now offer colour overlays to stroke patients with reading problems which enhances their quality of life post stroke, patients report back that very helpful especially in early stages post stroke.* ***Plan to audit*** *which overlays patients find most helpful as have noticed tend to choose yellow or green.* ***Will also contact stroke special interest group*** *before starting audit to discuss.* (Female orthoptist, band 6)

> *I learnt how to* ***perform post op strabismus checks*** *which streamlined clinics, improved patient waiting times for appointment as well as in clinic.* ***Freed up consultant time*** *to see more urgent patients. (*Female orthoptist, band 7)

There were gains to be had in eye-care, as noted above. Educational activities in the first instance included academic and observational self-directed learning, to be followed up with obtaining service quality and service user feedback data. In the second, the learner learnt how to undertake more specialist tasks which allowed colleagues to focus upon more urgent cases. It is interesting to note that motivation plays an important part in these scenarios, demonstrated by apparent appetite and motivation for self-starting learning.

> *Electrophoresis: After reading around the subject in waiting time,* ***I recognised the need to improve cryoglobulin process****, keeping samples warm whilst being processed. Requested the purchase of a dry heat block.* ***Brought to the attention of***

> ***Lab Manager*** *who also investigated the need. Our process is now better,* ***with many more positives being recognised****. As a consequence we have seen an upsurge in requests for this test. This has* ***benefited the patient by provided a better risk stratification****.* (Male Biomedical Scientist, Band 8a)

In this Biomedical Science situation, again self-starting and embedded experience is important.

Patient safety

This sometimes involved improving skills, related to safer care but also reflecting on untoward incidents in order to learn from them.

> *I attended a clinical update day organised by my employer which covered* ***airway management.*** *We were instructed in the* ***use of some new devices*** *- this has* ***allowed me to confidently utilise these*** *items when managing a patient's airway to ensure the best possible outcome for the patient.* (Female paramedic, band 7)

> ***Reflection on a critical Incidents*** *means I have been able to* ***identify similar signs*** *in other cases and avoid the same problems. This has meant a* ***quicker adaptation for clients****.* (Female occupational therapist, band 6)

> *Adult and child protection training provided valuable information and* ***indicators to be evaluated*** *when assessing individual cases.* ***Enabled identification of at-risk patients*** *allowing timely intervention.* (Male Prosthetists / orthotists, band 8b)

These quotes provide a clear example of how CPD did lead to patient benefit and help to illustrate how CPD can be transferred to practice. In all cases, the participants seem to have gained greater self-confidence. In all three cases, the participant has gained the ability to identify better care for highly vulnerable, at-risk patients.

Qualitative comments from the survey

This section focuses on quotes taken from the end of the survey inviting registrants to make any other comments on the CPD and audit system.

We received 649 additional comments about the HCPC CPD and audit system.
A selection are provided below illustrating many of the same themes that were identified in the interviews. These several themes were found to be as follows:

1) poorly performance colleagues;
2) participants' views and experiences of falsifying CPD activities;
3) the need for patient feedback;
4) experiences of audit;
5) CPD activities that were not focussed upon patients;
6) double auditing;
7) the fear of auditing;
8) a lack of feedback;
9) the lack of protected time for CPD, and attendant employer support; and,
10) The need for more information regarding what CPD is required.

Clearly, the experiences that these examples discuss are mixed with respect to negotiating CPD and feedback systems, everyday contacts with fellow professionals, patient feedback, management support, and general learning activities. Examples of these themes are presented together below.

Poorly performing colleagues

There were some comments focussing on concerns that poorly performing members of staff could still pass their CPD audit. Again, particular issues within the quotations are highlighted.

> *As a manager with responsibilities that include investigation into adverse incidents, complaints and serious incidents* ***I am often disappointed, dismayed and sometimes even alarmed by the standards of some of my professional colleagues****. I appreciate the cost and logistic implications of increasing the number of staff/registrants being audited each year but* ***feel that perhaps those subjected to investigations for complaints, adverse incidents or SI's should be flagged up for audit in some way. Whether this should be done locally to an agreed standard or done externally to ensure objectivity and consistency is another question perhaps.*** (Male paramedic band 7)

> *I have a **very poorly performing member of staff who was called for audit**. She tried to defer as she had been off sick. This wasn't agreed so **she had to submit**. **She borrowed work from staff who had previously been audited and persuaded other staff to help her and they did.** She shouldn't have passed, her practice remains poor and I am having to manage her through competency* (Female dietician, Band 8b)

> ***It is easy for poorly performing professionals to create an excellent CPD portfolio**. It shows a lot of thought but does not demonstrate competence.* (Male Prosthetists / orthotists, band 7)

> ***I feel it would be of benefit for greater numbers to be audited.** Whilst I feel that for most professionals such an audit does indeed support patient safety, **there will, sadly, be unscrupulous practitioners in all professions who may be missed despite this**.* (Female physiotherapist, band 7)

These highlight seeming deficiencies in the audit system, as well as what are perceived to be injustices that occur within the everyday work culture and those members of staff who inhabited the same performance regime as others who can 'game' the CPD and audit regimes, on occasion with the collusion of other colleagues. Given the role, as well as the concerns of the first commentator, these ought to an issue of concern.

Considering falsifying CPD activities

Some respondents commented that they thought that the current system provided the opportunity to potentially provide fictitious CPD and falsify evidence.

> *I am a strong believer in CPD activities but **I do not believe that the HCPC's audit system helps check competence or keeps patients safe**. Instead, **it checks the registrant's ability to write about CPD, which could be fictitious. It checks that they know what is expected but not if their practice reflects this.*** (Female Prosthetists / orthotists, band 7)

> *I haven't falsified any CPD activities to date but that's not to say that I haven't been sorely tempted at times! **There is also the issue that my understanding of my CPD folder is as a record of my own personal learning (for HCPC purposes) but I have been asked to present my CPD folder when attending job interviews.*** (Female occupational therapist, band 6)

Very easy to fabricate. Huge paper case & lacks validity

What these quotations highlight is that it can be a participant's self-interest to fabricate CPD activity and attendant records, especially if career progression or job security may be at

stake. It seems that in some cases, the system may miss importance qualities of care and professionalism.

Need for patient feedback

> *I do think that CPD is important,* ***but I do think that professionals that are keen to do and deliver the best treatment will automatically do the required CPD****. The trouble then being that we then need to fill in lots of paperwork to prove that we have done it.* ***It's a pain to do****. We just want to get on and treat and ultimately is a paperwork red tape thing we have to do. I think that the system is flawed. Physios that do not really care about the patients will then not really care about CPD requirements- as a result they will fudge their CPD paperwork. I think that asking the patients of the physios is a far better way of finding out if a physio, in my case, is good or indifferent in their practice. Or even setting up a 'secret shopper' type event so that the physio can be assessed from a patient point of view, or someone to observe their treatments.* ***One can learn a lot as to how the clinician works and thinks listening and watching their treatments rather than all the paperwork... just an idea*****.**

This quote highlights the required service ethos of healthcare. Seeking out user feedback, or even utilising surveillance and testing techniques from the world of retail are suggested.

Experience of audit

> *I was audited in 2008. I'm aware that we are meant to have 3 months to complete but I do remember I received my letter late therefore had less time to complete.* ***At the time my employer didn't give me too much time to complete the work****, I was only able to once patients had been seen and only if there was time left at the end of the day. Some colleagues of mine have been audited since and our board are now allowing practitioners' time to complete their profile.* ***I have found since being audited I was able to give advice to colleagues when they were completing their profiles. The most difficult part of my profile was gathering the physical evidence as I wasn't too organised with my certificates etc.****, I tend to be more organised and keep a CPD folder these days.* (Female chiropodists / podiatrists, band 6)

> *I really enjoyed being in the first cohort of physiotherapists who were audited.* ***It made me realise some of the good work I have done. I feel it would be of benefit for greater numbers to be audited.*** (Female physiotherapist, band 7)

> ***I enjoy CPD and totally agree with its value****, but the audit process means writing a whole statement on top of all the CPD which you already have.* ***It would be much easier to just submit the relevant CPD for the last 2 years, and a list of these activities and which HCPC category they support, rather than a statement as well.*** (Female Orthoptists, band 7)*.*

These quotes suggest that experiencing the audit process is a positive journey of self-discovery for participants, offering opportunities for reflection, and the sharing of gleaned knowledge with colleagues.

CPD that is not focused on patients

> ***Need to consider clinicians who become managers****, who's CPD may be more focused on management processes rather than the delivery of direct patient care.* (Female radiographer, band 8c)

This participant feels that the CPD process may not always cover the most appropriate dimensions of workplace behaviour and focus. This can be important to those who must face in multiple directions within the organisation.

Audited twice

> *I have been audited twice.* ***Following completion of my first audit, I became completely committed to this process as an excellent way of pushing up standards. I reflected on how I should encourage CPD amongst my team,*** *how to encourage the way staff see different opportunities for development as CPD, and the importance of their portfolio. I now include a session each year on CPD in our annual clinical governance professional practice session, and include its importance in the induction of all staff. Completing the audit was a superb way of demonstrating that 'going on a course' is only one of a few ways of CPD, and always explain this in my preceptorship talk. It also encouraged me to keep my own portfolio up to date with relevant, reflective CPD.* ***Successful completion gave assurance to the Trust that I am competent. I was then audited again two years later. I did not feel this was as useful, and I did not feel I learnt anything new by completing the exercise again.*** *My Manager felt it would have been more useful to the Trust if they had assurance that another member of the department was competent. The results are published in our Trust, so it appears that only one member of the department has been assessed as competent. I believe wholeheartedly in the audit process.* ***I have worked for a long time in several different Trusts, and have, on occasion, been appalled at how out***

> ***of date some dietitians have been, so applauded this process when it was introduced.*** *However, I feel that once audited,* ***there should be a way to exclude that person from the next audit cycle. This would then give a wider range of people the opportunity to experience the audit, and provide managers with assurance about more members of their teams.*** (Female dietician, band 8a)

It seems that there is an issue with regard to who gets audited, and under what circumstances. Some healthcare professionals may not be audited at all, with others potential called up twice or more.

Fear of being audited

Several comments by registrants highlighted that they were in fear of being audited and clearly saw it as a frightening and stressful event.

> ***Horrible system that keeps people in fear of being selected*** *and having to document their CPD in a way in which* ***most people don't usually do unless they have a higher management position****. CPD should be checked my line management every year in IPR's to ensure everyone is achieving CPD and improving services within the financial constraints of their service. (*Female physiotherapist, band 6)

> *I personally find the current audit system quite stressful.* ***I am not alone in constantly feeling that I 'should' be doing some CPD activity (any old CPD activity!) on a more regular basis, just to fill my folder up.*** *The stress is caused by trying to identify / access a relevant CPD activity, find the time for it (****always in my own time****),write it up and apply it to my own practice; and lots of time feeling guilty that I haven't done it!* ***I tend to have a blitz when the guilt gets too much, and especially when the audit period is looming****.*

> *Don't know enough about it to comment,* ***I just fear getting a letter asking to be audited despite having an up to date record of my CPD*** *however I do understand why this is done.*

It seems that these participants feel that there is a lot riding on the audit system. Firstly, it is seen as rather arbitrary with respect to selection. Also, the results of participation are seen as arbitrary as well, a certain ‘journey into the unknown’.

Lack of feedback

There were several comments related to respondents not receiving feedback following their audit confirmation. Respondents reported feeling frustrated that they had put a lot of time and effort in to their CPD and audit submission to only receive a ‘brief’ letter to say they have

complied with the standards. Respondents commented that they would have found it valuable to have some feedback to help them improve in the future.

> ***Given the time, effort (and stress!) required to complete the audit process a simple "complies"" is insufficient feedback****. **The emphasis on CPD is toward 360 degree feedback, self-reflection and evidence. HCPC do not apply this ethos when giving audit feedback.** I believe I did not benefit from the audit other than I continued to have the right to practice within my profession. **I would like to have learnt from the experience and have my weaknesses and strengths identified by the auditor.** This would have improved my practices and benefited the patients I thought It was disappointing after many hours work **preparing for audit it took 7 weeks** to get a standard letter saying ""you've reached the required standard", with no further feedback. It would have been much more helpful to have some feedback, as I still don't know if I scraped though or sailed through.* (Female Orthoptists, band 7)
>
> ***It would be helpful where individuals are selected for audit that some feedback could be provided from the CPD assessors to the HCPC and this communicated to the particular profession/ employer.** As an employer of psychologists I am keen to ensure our staff are engaging effectively with the HCPC CPD system**. Feedback can be helpful in giving guidance particularly around specific aspects of practice**. I would also recommend that where a registrant is called for audit that there is a also a notification communicated to the individual's employer simultaneously. **I would be interested in the HCPC views on the role CPD could play in performance discussions and professional appraisal.** Clearly this may be an issue where the HCPC views a decision to link CPD to performance discussions as one that rests with an employer. Nonetheless, it would be helpful to know the HCPC policy thinking here. **Fitness to practice issues may of course stem from a number of issues, events or behaviours including not doing CPD. In the interest of educating professionals and reducing the number of FtP issues there may be a case for the HCPC to consider developing policy and guidance on this specific issue.***

Both speakers here discuss their negative feeling about the lack of the lack of feedback form the process, expressing a desire to learn further from the experience, and incorporate this into their future work. The second speaker specifically raises issues around fitness to practice (FtP). HCPC is seen as not playing quite an active enough role in this audit process, with a need for future policy developmental work being identified.

No protected time for CPD, needs employer support

Respondents commented that protected time was often an issue when trying to complete CPD given busy workloads. Several commented that provision of protected time should be the responsibility of their employers.

> ***I view the current CPD system as a reasonable performer given that there is no protected time available for it.*** *Being subject to HCPC audit certainly focuses the mind (I've been audited twice). As a measurement of professional competency it has limitations but it would be essential that any more effective tool was either quicker to follow (which seems unlikely) and/or properly resourced by the employer.* ***It's essential that any CPD system has appropriate, up front buy-in by the employers to ensure already busy staff are not unnecessarily overburdened.*** (Male Clinical scientists, band 8d)
>
> *I feel it is* ***a challenge for those radiographers who perhaps only work one day a week or are on a Bank contract as it is difficult for them to get funding for courses etc.*** *and are therefore not exposed to CPD opportunities as readily as other members of staff.*
>
> ***Please make it mandatory for employers to book CPD time.*** *Our biggest struggle is having the willingness to do CPD but not having any time due to clinical pressures at work. Also the audit period is just before Christmas for radiographers, while I realise that the CPD is an ongoing thing, no one wants to be bringing it all together for the HCPC audit and worrying about the results at this time of year.*
>
> *To* ***ensure that time is given to all social workers including social workers who are self-employed to make sure they can complete their CPD,*** *as sometimes due to work pressure it is not always possible to enter the activity.*
>
> *NHS trust should be hauled over the coals about NOT providing protected CPD time.* ***The HCPC should use their teeth to punish the trust not the over worked, over stretched, over stressed staff.***
>
> *I wish my employer gave me more time in order to undertake CPD activities. We are told we have so many hours per month, but this never happens* ***when you have a heavy caseload to manage, and when it comes down to it casework takes priority every time. I wish supervision included more time for reflection on methods/ values and service user experience, rather than merely a caseload audit.***

Employers do not value CPD time enough - it should be essential protected time every few weeks.

These comments raise certain issues. One is that the Trust is seen as bearing some responsibility for ensuring its staff are compliant with the audit process, and with general involvement in the process; yet it seems that some staff feel the burden of compliance is passed solely onto them, through their own everyday time management of duties. These speakers comment that the Trusts are obliged to provide protected CPD time, yet it is not clear that this takes place. There is also role specific pressures, as well as more generic, cross-professional ones; radiographers highlight seasonal issues associated with autumnal and winter workloads. The nature of individual contracts clearly is an important issue for others, with part-time and short-term contracts limited the eligibility for access to training budgets. Indeed, the social worker above highlighted the fact that some colleagues are not even directly employed by their NHS Trust, thus the need to comply with other terms and conditions of their contract might preclude CPD activity. These carry implications for HCPC, in that the jurisdiction of their audit system is not always congruent with the requirements of professionals expected to comply with it.

More information about what CPD is required

> ***It might be helpful to have a simple guide to what should be in your CPD file provided by email alert each time the 2 year renewal comes round (as a reminder for people to think about how they add to it over the next two years).*** *NHS jobs are usually extremely busy and you're lucky if you actually get the time that you are allocated, to do the CPD work.* ***I think, even though we all know roughly what should be doing, it's hard to be organised about it with all the appraisal stuff that we have to do, the management of caseloads, the training etc., then trying to have a bit of down time when you're out of work.*** *Having a guide of what's considered a minimum amount of training/evidence etc. might also help as I know people who have been audited and it seems to be a rather stressful process. Maybe giving us some clearer (easily accessible) guidance so that hopefully, when you get audited, there's less stress attached to it.* (Female occupational therapist, band 6)

This speaker further highlights the fact the CPD activity takes place against a backdrop of other high pressures, due to other forms of performance management, and workplace obligations. HCPC is asked here to issue reminders to staff. It is interesting that throughout

all of the quotes above, line managers do not always seem to figure as important agents of smoothly implementing and managing an individual's CPD activity.

These quotes taken from the survey further illustrate the same themes identified from the interviews. They triangulate well with the interviews and provide added confidence in the data.

Discussion

Generally survey respondents agreed with positive statements about the role and usefulness of CPD. However, opinion was more divided on a number of issues. Firstly a significant minority of respondents disagreed that third party feedback should be included in the CPD profile. This could be registrants fail to see third party evidence as CPD or because they are sometimes reluctant to agree to changes that may increase the burden on them when compiling their CPD profile. Around a quarter of respondents felt that CPD profiles may be easy to fabricate, highlighting a potential weakness in the system. Roughly 40% of respondents agreed that CPD was too expensive, with some modest variation across professions, perhaps reflecting the differing costs of training for the professional groups. Around half of respondents thought that a CPD audit took too long to complete, although the three month scale was generally viewed positively.

Of the potential purposes of the CPD, the ability to identify poor performance was ranked generally low, reflecting an overall perception that CPD was not an effective way of detecting poor practice or professionalism. Likewise nearly 40% of respondents didn't feel that CPD helped ensure patient safety and approximately 25% felt that CPD did not ensure continuous fitness to practice. The high level of personal costs of CPD audit were also viewed as a weakness by most respondents, as was, lack of feedback from the process.

The main limitation of this survey was the 11% response rate which increases the risk of response bias (e.g. the probability that the views expressed are unrepresentative of the wider, general population of registrants). However, this response rate is in keeping with that encountered in previous similar surveys, and would be difficult to increase without the addition of considerable resources (e.g. significant payment for participation). There are alternative strategies that may be considered for future surveys of this type. This would include the use of smaller, more targeted samples of registrants employing ‘complex survey design’. Aspects of complex survey design include the use of stratified (e.g. by age or ethnicity) sampling as well as cluster sampling (e.g. by geographical location) in order to either obtain more representative samples, or to oversample smaller groups (e.g. professions with a relatively low number of registrants). However, as mentioned earlier, if a smaller, more selected sample were targeted then incentives would have to be offered (such as cash or in kind payments) in order to ensure that most targeted registrants responded. In addition, where complex survey design is implemented the results have to be analysed with care, usually using survey weights to account for the over or under sampling of certain groups. The correction for such sampling strategies may theoretically, themselves, introduce bias into the findings.

In addition to the interviews in work stream two, this work stream allowed us to triangulate data sources and look for similarities and differences across the interviews and survey. The free text comments from the survey substantiated the themes identified from the qualitative work as there was concern about the risk of assuring continuous fitness to practise, the potential of falsifying CPD records, fear of being audited, and the lack of protected time to complete CPD. Many respondents gave examples of how their CPD had impacted on practice which related to patient safety, clinical effectiveness, and patient experience.

6. Work stream 4: Linkage of fitness to practise data with CPD data held with HCPC to identify potential disadvantages of CPD

Background and Rationale

This work stream was conducted in order to establish whether there were any significant differences in the CPD profiles of those with or without Fitness to Practise (FtP) concerns. Any differences detected between profiles could potentially serve as 'early warning signs' or flags for registrants who may be at risk of poor practise or issues relating to professionalism. The HCPC have held electronic CPD records since 2014, prior to this paper copies were scanned into the system. The CPD database contains information about the CPD profiles for registrants selected for audit from 1 January 2008 to 31 December 2014 and accepted at time of data extract. The FtP database contains data on registrants referred for FtP concerns from 1st January 2008 to the end of 2014.

Method

CPD and fitness to practise data and matching

Initially, the intention was to compare and match a sample of those who had been audited AND censured in relation to FtP concerns WITH a sample of registrants who had been audited AND had no FtP concerns raised. However, exploration of the existing databases showed that there were only three registrants who had been censured AND audited for CPD, of which one had the censure revoked at appeal. At the time of designing the proposal the HCPC were unaware of the actual data held and the number of individuals who would fall into this category. To discover this number we had to clean the data and produce new identifiers to enable us to link the databases which took time during the study. Subsequently, the FtP issues were broadened to include those who had been subject to concerns in relation to FtP and had been deemed above threshold for further investigation.

The HCPC have an investigation process for FtP issues. The first stage is receiving a concern, for example from an employer or manager. The HCPC then decide whether or not they need to get involved. Following this the case may be closed or investigations may be carried out by a case support officer, which may lead to no case to answer or reaching the standard of acceptance and further investigations. The standard of acceptance is a threshold for when a concern is deemed by a case support officer as warranting further

action. To meet this threshold the concern must be made in the appropriate form (in writing, sufficient detail) and there needs to be credible evidence which suggests that the registrant's fitness to practise is impaired. Further investigations may involve an Investigating Committee Panel, and then a hearing by a panel of Conduct and Competence Committee or the Health Committee if required. The outcomes may lead to no further action, caution of the registrant, make conditions of practice that the registrant must work under, suspend the registrant, or strike the registrant's name from the Register.

The HCPC enabled us to have access to the databases for research purposes. The analysis and reporting of data was done anonymously. We visited HCPC offices (28/09/15) to familiarise ourselves with the HCPC CPD and Ftp databases. During the visit we developed a data extraction form. We looked at the CPD spreadsheet and database containing information about the CPD profiles for registrants selected for audit from 1 January 2008 to 31 December 2014 and accepted at time of data extract.

We looked at the databases and created a sample of cases to look at. The data were managed and cleaned (e.g. removal of repeated data entries) to allow linkage between the two databases to take place. Thus, the number of registrants in both datasets could be identified via their HCPC number and profession (the combination of these serving as the unique identifier). A sample of registrants who had an audit and those who had a *fitness to practise* case were extracted.

Overall, there were 91 registrants who were in this situation AND should have had CPD depositions available, BUT most were closed *'no case to answer'* status. When we removed these, there were still 21 cases with overlap, even if the *fitness to practise case* was dubious such as *'Case Closed - Not Well Founded'*. Those cases of referrals for FtP concerns that were above threshold for investigation and did not conclude with a '*no case to answer'* verdict AND had been subject to a CPD audit were matched with a group of CPD audited registrants who had no FtP issues raised against them.

In total there were 21 registrants in the FtP referral group. A 2:1 matching algorithm was used to identify suitable controls. The variables used for matching were as follows:

- Profession;
- world region of qualification;
- gender;
- age at CPD audit.

'Nearest neighbour' matching was performed in that sequence. Where there were several possible matches two control registrants were selected by chance using randomly generated numbers (www.random.org). Date of birth (and hence age) was missing in three FtP referred cases and in this situation a match was made with a control with an average age for that professional group. In terms of professions, in the FtP referred group there were two chiropodists, three Operating Department Practitioners, three Occupational Therapists, five paramedics, four Physiotherapists, three Practitioner Psychologists, and one Speech and Language Therapist. All cases and controls had their registration source as listed as the UK, with the exception of one case which was reported as 'GP' ('grandparented').

We then decided to look at these 63 profiles in more detail to see if there were any differences between the profiles. Two researchers (JI and PC) visited HCPC offices for three days (2-4th October 2015) and populated the data extraction matrix for the 63 profiles.

Statistical analysis

As a case-control design was used a conditional logistic regression analysis was performed. In order to explore the potential association between the type and nature of evidence presented and other factors associated with the CPD submission process, dummy variables were created (for example, patient feedback included yes/no; 1/0). The analysis evaluated which, if any, predictor variables predicted 'caseness'. The results are tabulated below.

Findings

The basic demographics of the cases and controls are shown below:

	Gender	Mean age at CPD (std. dev.)
Cases (N=21)	11/21 male	48.22 (5.4)
Control (N=42)	22/42 male	47.59 (5.4)

The results of the conditional logistic regression are shown in the Table 25 below. As can be seen there were no significant associations. However, an association of borderline statistical significance is observed between cases referred for FtP concerns and the lag between submission and acceptance of CPD submissions. In particular cases were more prone to have lags exceeding 170 days in this respect.

Table 26 Results of conditional logistic regression predicting 'caseness' (referral for significant FtP concern) from a sample of cases and matched controls

Predictor	Odds Ratio (OR: for being a 'case')	p	OR 95% CI lower limit	OR 95% CI upper limit
Lag between submission of CPD and acceptance (days)	1.00	0.08	1.00	1.01
Presence of long delay in above (>170 days)	8.58	0.05	0.98	74.91
Index of Multiple Deprivation of home address (rank in England)	1.00	0.96	1.00	1.00
Profile submitted in time yes vs no	0.40	0.22	0.09	1.75
Problem with timely payment? Yes vs no	1.14	0.83	0.33	3.90
Public (NHS/University) vs Private practice	0.60	0.37	0.20	1.80
Range of evidence: 'some' vs 'high'	0.91	0.92	0.14	6.02
Range of evidence: 'some' vs 'moderate'	1.32	0.64	0.41	4.24
Self-report evidence- Journals?	1.74	0.35	0.55	5.51
Self-report evidence-Local meetings?	1.29	0.68	0.38	4.34
Self-report evidence-Watching videos?	1.00	1.00	0.09	11.03
Self-report evidence- Patient notes?	3.00	0.23	0.50	17.95
Self-report evidence- Reflections?	0.82	0.72	0.28	2.40
Self-report evidence- Discussions with colleagues?	0.87	0.83	0.24	3.11
Self-report evidence- Presentation?	0.54	0.31	0.16	1.79
Self-report evidence-CV?	1.44	0.73	0.19	11.12
Third party evidence- Manager report?	1.31	0.67	0.38	4.45
Third party evidence- Colleague report?	1.57	0.44	0.50	4.93
Third party evidence- Patient feedback?	1.28	0.77	0.24	6.89
Third party evidence- Relative/Carer?	1.00	1.00	0.16	6.42
Third party evidence-CPD certificates?	2.14	0.36	0.43	10.71
Third party evidence-Publications?	0.35	0.20	0.07	1.73
Third party evidence-Committee feedback?	0.35	0.36	0.04	3.36
Third party evidence – Student feedback?	4.00	0.11	0.73	21.84

Discussion

The analysis uncovered virtually no quantitative differences in terms of CPD profiles between those referred for *fitness to practise* concerns and a set of matched controls without Fitness to Practice concerns. The qualitative analysis indicated that there was huge variability in what was submitted for audit. The portfolios were difficult to navigate and often contained gaps in the amount of evidence which was submitted. While many registrants had submitted certificates of attendance at various courses and workshops, the presence of other forms of evidence such as 360 feedback and appraisal documentation was lacking.

A number of potential limitations must be borne in mind however. Firstly, the overlap between those audited and those with *fitness to practise* concerns raised was very slight. This is likely to have given rise to issues relating to study power. However, very few non-significant trends were noted, so it may be that there are genuinely few, if any differences between the CPD profiles of the two groups. Importantly this group only included two registrants that were censured in relation to *fitness to practise*; the remainder received no eventual censure. It is therefore unknown whether the CPD profiles of those censured for *fitness to practise* would have differed from a control group. Also, due to missing data, it was not possible to match on years in practice (in medicine this is noted to have a curvilinear relationship with *fitness to practise*) though, this potential confounder would be important if significant differences were observed. It is also important to note that the sample was matched on age, region, profession and gender. Therefore no conclusions can be drawn about these variables as predictors of *fitness to practise* concerns.

Overall the findings suggest that few, if any, differences exist between the CPD profiles of those referred for fitness to practise concerns and those not. However, increased routine CPD sampling in the future may allow for a better overlap between fitness to practise and CPD databases permitting a more definitive analysis.

The research team offered to extend the analysis to include a wider group of registrants (particularly the larger professions, e.g. social workers) however the advisory group thought this would not be beneficial to the overall project. An additional suggestion by the team was to focus on registrants who were not engaging with the CPD audit. The thinking was that these registrants may be less conscientious and the lack of engagement may be an indicator of a lack of professionalism which could be a red flag for under performance. Again the advisory group felt this would not add to the study.

Recommendations

- To ensure confidence in CPD audit submission, we recommend HCPC request evidence of multisource feedback on practise. This could include sign off following staff appraisals, colleague feedback and patient feedback.

7. Work stream 5: Examine the costs and resources currently required in the total process of assuring continuous fitness to practice

Background

Health and care professionals are a finite resource of health systems and the HCPC represents a regulatory mechanism for their registrants aiming to enhance service and patient benefit through 'Continuing Professional Development '(CPD). This supply-side regulatory function monitors registrants and time invested in CPD activities and aims to ensure the continuing fitness to practice of the healthcare workforce.

Several policy-relevant questions arise when assessing the value of HCPC CPD activities. Firstly, what are the costs of the process to the employer and its staff? Secondly, how much time must HCPC registrants invest in conducting CPD activities and what is the associated cost? A registrant must be regarded as having only finite available time and so the opportunity cost of conducting CPD activities should be considered in relation to other potential activities (e.g. service demand); this raises the question as to whether time invested in CPD is justified by perceived service and patient benefit? Finally, can this survey of registrants provide information to help prioritise future CPD activities and advise on required amount of protected time?

Specific research questions for economic analysis:

- Question 1: What are the costs of the HCPC CPD and audit system? Accounting for protected time provided to staff and the running costs of the HCPC organisation, by profession and on aggregate?
- Question 2: (a) What CPD activities are utilised by HCPC registrants, and how much time do they take to complete them? and (b) what is the associated cost and perceived benefits of CPD activities?
- Question 3: What are the cost-benefit ratios for each CPD activity and which CPD activities are indicated to provide the best return on investment?
- Question 4: What is the relationship between CPD activities and allocated protected time?
- Question 5: What are costs of CPD are incurred by the registrants or their employers?

Methods

The questionnaire was prepared and administered using 'Survey Monkey'. The survey was developed over various stages as described in work stream 3. Questions were included to ascertain:

- The amount of protected time provided for CPD activities undertaken (Q10);
- How long activities took to complete (Q11);
- The perceived service and patient benefits of CPD activities (Q14);
- How costs of CPD activities were apportioned between personal and professional budgets (Q15);
- Individual registrants salary as indicated by current NHS Band (Q9).

Senior HCPC staff provided feedback on the survey and commented on the list of relevant CPD activities. The survey went live on the 18/01/16 and closed on the 22/02/16. Other information on response rates are provided in the methods section for the online survey (workstream 3).

To ascertain the HCPC operational cost of regulating CPD, the economic analysis referred to activities itemised within HCPC annual reports. Annual reports describe describes '*partners'* roles as including CPD assessors, however this does not disaggregate HCPC specific of regulating CPD. Therefore, expert opinion were sought from HCPC to indicate costs of regulating CPD. The proportion of HCPC total annual income spent on regulating CPD was estimated as follows:

$$CPD\ regulation\ (\%) = \frac{Costs\ of\ regulating\ CPD}{Total\ operating\ income}$$

The economic analysis presents costs to the registrant and the above proportion used to estimate what proportion of registrants' annual registration fee is devoted to regulating CPD. This is calculated as follows:

$$Cost\ of\ regulating\ CPD\ =\ [CPD\ regulation\ (\%)]\ X\ [annual\ registration\ fee]$$

The *cost of regulating CPD* represents the amount of money each registrant pays towards HCPC regulating their CPD.

Analytic approaches

Where feasible results are presented as descriptive statistics. Costs are estimated from the product of the quantities of time required and registrants indicated NHS Band salaries or equivalent. In certain analyses, estimates were obtained using econometric methods. The quantities of time required to complete CPD activities statistically for count data[5] and appropriate statistical methods were required (further details are provided within the results section). As the statistical distribution of CPD activities is not a normal distribution, estimating 95% confidence intervals uses negative binomial regression with 1,000 bootstrap replications[6]. This provides bias-corrected 95% confidence intervals to illustrate uncertainty surrounding estimated means. A strength of designing the survey to estimate costs of CPD is that analyses does not make any assumptions to estimate costs of CPD and sensitivity analysis was not required.

Results

The results are presented sequentially to answer the research questions.

Question1: *What are the costs of the HCPC CPD and audit system? Accounting for protected time provided to staff and the running costs of the HCPC organisation, by profession and on aggregate?*

In 2015, HCPC had 330,887 registrants and operational financial costs were fully funded from fees paid for registrants (HCPC Annual Report 2015[7]). That year, the HCPC budget was £26.3 Million. The annual fee for a registrant is currently £90[8] and, the sum of all fees forms the total annual operating cost of HCPC.

Given the uncertainty of the HCPC budget, located to CPD, experts' opinion was sought on the costs of CPD. One key element is assessing profiles and HCPC assessed 6,599 profiles between 2013-15 (each profile assessment requires two assessors, each paid £20 per profile). Overall, HCPC estimate the proportion of total operating incomes spent on regulating CPD ranges from 3% to 6% (midpoint: is 4.5). This is based on assessment fees and expenses (employee time, managing the process), supporting functions (policy,

[5]Cameron, A. C.*; Trivedi, P. K. (2013).* Regression Analysis of Count Data Book *(Second ed.). Cambridge University Press.* ISBN *978-1-107-66727-3.*
[6]Mooney CZ, Duval RD. Bootstrapping: a non-parametric approach to statistical inference. Newbury Park CA, Sage, 1993. http://www.sagepub.in/books/Book3980
[7] http://www.hpc-uk.org/publications/reports/index.asp?id=1068
[8] http://www.hcpc-uk.org/registrants/renew/fee/

communications, Human Resources), postage, contribution to overheads (buildings, utilities), and printing of publications and materials. As an associated cost to the registrant, this suggests that £4.05 (range £2.70 to £5.40) out of each annual registration fee (£90) is required to operate HCPC regulatory activities provided by partners acting as '*CPD assessors'*. This further indicates that HCPC's annual operating cost for regulating CPD is £1.2m (range £0.8m to £1.6m per annum).

The total cost of HCPC regulating CPD activities is defined as *cost of regulating CPD*, plus cost to employers for protecting registrants' time to conduct CPD activities (as reported by individual registrants in the survey). From the perspective of the employer, the cost of protected time is valued in terms of registrants' full staff cost multiplied by the reported number of hours of protected time they report receiving.

Table 27 presents the annual financial contribution towards the centralised CPD regulatory function, for each individual profession, based on estimates of protected time staff received, and estimates of annual cost of this protected time (based on Full Staff Costs – see Appendix 6). The total cost of HCPC CPD activities is defined as the sum of costs for protected time plus the percentage of registrants' financial contribution toward HCPC CPD regulation. To account for underlying count structure of the data, estimates are obtained using negative binomial regression and bias-corrected 95% Confidence Intervals are generated using a bootstrap (1,000 replications).

Table 27: Estimated costs for CPD to the HCPC, the employer and the registrant

Professions	n	Minutes per month of employer protected time for CPD: Mean (95% CI*)	Cost of protected time given by employer: Mean (95% CI*)	Costs of regulating CPD per registrant (proportion of fee) Midpoint (range)	Total cost of CPD accounted for in protected time (costs of CPD to employer) Mean (95% CI*)
Arts therapists	26	47 (8 to 271)	£521 (£71 to £3,828)	£4.04 (£2.70-£5.40)	£525 (£222 to £1,240)
Biomedical scientist	33	24 (10 to 58)	£258 (£31 to £2,123)	£4.04 (£2.70-£5.40)	£262 (£94 to £729)
Chiropodists / podiatrists	16	70 (0 to 6.5m)	£1,176 (£0 to £503m)	£4.04 (£2.70-£5.40)	£1180 (£51 to £27,147)
Clinical scientists	32	59 (23 to 153)	£834 (£324 to £2,144)	£4.04 (£2.70-£5.40)	£838 (£323 to £2,174)
Dieticians	48	79 (45 to 140)	£1,056 (£461 to £2,417)	£4.04 (£2.70-£5.40)	£1060 (£473 to £2,378)
Hearing aid dispensers	28	70 (26 to 189)	£770 (£96 to £6,187)	£4.04 (£2.70-£5.40)	£774 (£229 to £2,618)
Occupational therapists	60	65 (40 to 107)	£692 (£386 to £1,240)	£4.04 (£2.70-£5.40)	£696 (£389 to £1,247)
Operating department practitioners	42	24 (5 to 124)	£228 (£114 to £458)	£4.04 (£2.70-£5.40)	£232 (£110 to £490)
Orthoptists	68	122 (92 to 163)	£1,250 (£913 to £1,712)	£4.04 (£2.70-£5.40)	£1254 (£927 to £1,698)
Paramedics	33	6 (0 to 64b)	£51 (£0 to £8.8b)	£4.04 (£2.70-£5.40)	£55 (£3 to £923)
Physiotherapists	71	76 (52 to 110)	£718 (£482 to £1,069)	£4.04 (£2.70-£5.40)	£722 (£492 to £1,059)
Prosthetists / orthotists	38	245 (164 to 368)	£3,214 (£2061 to £5,013)	£4.04 (£2.70-£5.40)	£3218 (£2071 to £5,002)
Practitioner psychologists	26	152 (74 to 311)	£2,182 (£314 to £15,157)	£4.04 (£2.70-£5.40)	£2186 (£980 to £4,878)
Radiographers	47	35 (5 to 258)	£221 (£15 to £3,162)	£4.04 (£2.70-£5.40)	£225 (£87 to £587)
Social workers	122	101 (71 to 143)	£1,042 (£721 to £1,506)	£4.04 (£2.70-£5.40)	£1046 (£731 to £1,496)
Speech and language	18	67 (2 to 1,857)	£695 (£258 to £1,872)	£4.04 (£2.70-£5.40)	£699 (£252 to £1,937)
All Professions	708	82 (71 to 95)	£929 (£781 to £1,104)	£4.04 (£2.70-£5.40)	£933 (£787 to £1,105)

- **Bias-corrected 95% Confidence Intervals (bootstrap with 1,000 replications)**

Across all professions, employers tend to allow an average of 82 minutes per month (95% CI: 71 to 95 minutes per month) for CPD activities. The average cost per year of allowing this protected time is £929 to the employer (95% CI: £781 to £1,104). The amount of protected time varies considerably by profession from 6 minutes per month (paramedics) to 245 minutes (or 4.1 hours) per month (prosthetists / orthotists), however, examining the bias-adjusted confidence intervals would suggest there remains some significant uncertainty in estimates at the disaggregated registrants' level.

In summary, the cost to the employer of protected time provided to staff is approximately £929 per year. The running costs of the CPD and audit system to the HCPC organisation is 4.3 million this is made up from £4.05 from each registrant (this is 4.5% of the registration fee).

Question 2 (a) ***What CPD activities are utilised by HCPC registrants and, and how much time do they take to complete them?***

Fifteen CPD activities were identified in collaboration with the research team and Health and Care Professions Council (HCPC). Survey respondents were asked to indicate whether they had conducted these activities in the last two years and, where respondents had conducted an activity, how much time this activity required in an average month. Table 28 and Table 29 present the proportion of respondents (by stated profession) who engaged with the specific CPD activities and the sample mean amount of hours per month that each activity required.

Table 28: Percentage of respondents engaging with each CPD and sample mean number of hours per month on each CPD activity (Art Therapist – Operating practitioner)

CPD Activities	Percentage of respondents using CPD (%) and average number of hours reported per month per CPD (hr) (by profession)															
	Arts therapist		Biomedical scientist		Chiropodists/ podiatrist		Clinical scientist		Dietitians		Hearing aid dispenser		Occupational therapist		Operating practitioner	
	%	hr	%	hr	%	hr	%	hr	%	hr	%	hr	%	hr	%	hr
Self-study: reading relevant articles, books, and policy documents	100	8.8	90	3.5	93	3.3	91	4.3	97	6	98	3.4	89	4	89	5.7
Self-study: viewing on line materials (excluding distance learning, e-le…	76	5.1	64	2.4	76	2.5	80	2.6	72	3.2	76	2.9	74	2.7	63	3.6
Self-study: reflection on practice, learning from experience, developing…	94	7.1	79	2.9	78	1.8	82	3	78	2.7	85	2.7	86	2.7	69	3.2
Additional roles: secondments, work shadowing, visiting other department…	14	0.4	21	6.6	33	1	39	1.5	25	0.7	31	0.7	44	4.6	29	1.3
Additional roles: representative on a committee, involvement with a prof…	28	1.1	26	0.9	24	0.8	48	1.7	51	1.7	11	0.1	31	1.2	30	1.4
Additional roles: mentor, coach, tutor, teacher, supervisor, assessor, p…	64	4.7	57	5.2	46	2.2	73	5.4	80	3.7	59	4.5	80	4.6	69	17.7
Additional roles: research, project work, writing, discussing or …	38	2.2	19	0.4	15	0.8	73	7.2	50	4.5	9	0.1	28	0.7	19	0.8
Formal education: courses, conferences, seminars, workshops, learning ac…	78	2.8	59	1.2	83	2	86	2.9	83	3.6	80	2.1	70	2.2	53	1.9

Formal education: distance learning, e-learning modules	28	1.1	26	1.1	50	2.8	32	0.5	26	0.7	48	1.2	21	0.8	29	2.1
Formal education: quality improvement activity, in-service training	34	1	34	2.3	33	0.8	41	1.5	53	1.2	44	1.2	56	1.4	40	1.6
Formal education: higher education qualifications	14	2.8	10	1.4	9	2	7	0.1	13	1.8	19	1.2	10	1.1	21	3.3
Third party: reflection on feedback from appraisal	40	0.8	24	0.3	17	0.2	34	0.4	30	0.4	33	0.4	35	0.4	23	0.5
Third party: reflection on multi-source feedback (360 degree feedback)	4	0	7	0	7	0.1	11	0	8	0.1	7	0	14	0.2	16	0.3
Third party: reflection on patient feedback e.g. audit of service users	38	0.8	10	0.1	30	0.3	20	0.2	37	0.7	33	0.6	28	0.4	11	0.2
Third party: reflection following complaints / critical incidents	4	0.1	24	0.8	20	0.3	21	0.4	38	1.1	17	0.2	31	0.3	14	0.3

Table 29: Percentage of respondents engaging with each CPD and sample mean number of hours per month on each CPD activity (Orthoptists – Speech & Language therapist)

	Percentage of respondents using CPD (%) and average number of hours reported per month per CPD (hr) (by profession)																All professions: hours per month for CPD activity
	Orthoptists		Paramedics		Physio-therapist		Prosthetists/ orthotists		Practitioner psychologist		Radio-grapher		Social worker		Speech&Lang. therapist		
CPD Activities	%	hr	%	hr	%	hr	%	hr	%	hr	%	hr	%	hr	%	hr	Conditional Mean (95% CI)
Self-study: reading relevant articles, books, and policy documents	99	3.1	92	4.8	96	4.8	89	3	100	6.6	91	3.3	89	5.5	95	1.8	5.7 (5.1 to 6.3)
Self-study: viewing on line materials (excluding distance learning, e-le...	83	2.4	80	2.8	80	3.1	75	2.1	71	3.5	66	2.4	70	3.1	82	1.4	4.5 (4 to 5.1)
Self-study: reflection on practice, learning from experience, developing...	87	2.5	83	3.3	88	3.3	79	7.3	95	6	80	5	70	5.6	85	3.1	5.7 (5 to 6.4)
Additional roles: secondments, work shadowing, visiting other department...	29	0.8	36	8.1	36	1.4	34	1.9	24	0.9	23	2.4	31	2.8	46	3.5	8.8 (6.2 to 11.4)
Additional roles: representative on a committee, involvement with a prof...	40	1.6	12	0.6	36	1.7	36	2	57	3.9	35	1	33	1.5	33	0.4	4.7 (3.8 to 5.6)
Additional roles: mentor, coach, tutor, teacher, supervisor, assessor, p...	78	8	69	18.2	72	4.2	71	15.4	81	6.4	67	7.9	59	6.2	72	4.4	12.2 (10.6 to 13.7)
Additional roles: research, project work, writing, discussing or reviewing...	46	1.9	15	0.4	33	1.2	43	2	55	3.7	24	3	17	0.9	28	0.4	6.6 (5.1 to 8)

Formal education: courses, conferences, seminars, workshops, learning ac...	78	2.2	54	3.7	84	3.5	77	3.4	83	2.7	58	2.3	72	4.4	85	2.3	4.7 (4.1 to 5.2)
Formal education: distance learning, e-learning modules	27	0.8	56	2.6	25	0.9	41	0.6	26	0.9	37	1.7	34	0.9	23	2.7	4.2 (3.4 to 5.1)
Formal education: quality improvement activity, in-service training	58	1.5	47	1.5	66	1.7	55	1.8	48	0.8	42	1.9	40	2	72	1	3.7 (3.2 to 4.2)
Formal education: higher education qualifications	14	3.4	37	2.5	17	1.4	2	0.7	10	2.4	18	1.5	23	3.5	5	2.6	16.7 (12.5 to 20.9)
Third party: reflection on feedback from appraisal	45	0.4	25	0.3	33	0.6	39	0.6	43	0.4	29	0.3	37	0.7	44	0.4	1.7 (1.4 to 1.9)
Third party: reflection on multi-source feedback (360 degree feedback)	11	0.1	5	0.1	15	0.1	9	0.1	12	0.1	9	0.1	12	0.2	5	0	1.5 (1.2 to 1.8)
Third party: reflection on patient feedback e.g. audit of service users	42	0.7	25	0.3	48	0.7	48	1.2	38	0.4	29	0.3	18	0.3	41	0.5	1.9 (1.5 to 2.2)
Third party: reflection following complaints / critical incidents	29	0.3	29	1.4	25	0.5	29	0.4	12	0.2	25	0.2	21	0.5	18	0.1	2.3 (1.8 to 2.9)

Table 29 also reports *conditional* means (and 95% CI) for the number of hours per month for each CPD activity. These conditional statistics are calculated only for registrants who undertake the CPD activity (i.e. ignore 'zeros' time for those no engaging in the stated activity); these are only illustrative and are not utilised to estimate costs across the population.

Question 2(b) *What are the associated costs and perceived benefits of CPD activities?* Having obtained estimates of the time spent on each activity, the next question for the economic analysis was how much do the CPD activities cost?

To answer this question, the monetary values for each respondent estimated using unit cost implied by reported salary and the associated full staff costs (further details provided in Appendix 6).

Table 30 and Table 31**Error! Reference source not found.** summarise costs per month on undertaking the 15 types of CPD activities, disaggregated for each profession, and **Error! Reference source not found.** also reports the cost per activity aggregated across all professions

Table 30: Average cost associated with time spends on each CPD (Art Therapist - Operating practitioner)

CPD Activities	Average cost associated with completing CPD activities (by profession) (£)							
	Arts therapist	Biomedical scientist	Chiropodists/ podiatrist	Clinical scientist	Dieticians	Hearing aid dispenser	Occupational therapist	Operating practitioner
Self-study: reading relevant articles, books, and policy documents	426	214	170	302	313	193	218	306
Self-study: viewing on line materials (excluding distance learning, e-le...	267	118	130	211	162	165	137	215
Self-study: reflection on practice, learning from experience, developing...	345	151	110	214	133	119	135	164
Additional roles: secondments, work shadowing, visiting other department...	24	306	78	115	42	29	248	73
Additional roles: representative on a committee, involvement with a prof...	56	57	73	144	101	5	68	68
Additional roles: mentor, coach, tutor, teacher, supervisor, assessor, p…	233	317	152	399	208	293	238	824
Additional roles: research, project work, writing, discussing or reviewing...	119	21	54	503	219	3	37	47
Formal education: courses, conferences, seminars, workshops, learning ac...	136	62	118	226	173	124	116	87
Formal education: distance learning, e-learning modules	56	63	147	36	14	72	42	113
Formal education: quality improvement activity, in-service training	50	137	55	92	60	70	72	77
Formal education: higher education qualifications	131	73	135	3	53	63	57	165

Third party: reflection on feedback from appraisal	42	21	16	29	22	21	22	31
Third party: reflection on multi-source feedback (360 degree feedback)	1	3	7	3	6	2	8	19
Third party: reflection on patient feedback e.g. audit of service users	38	10	25	19	59	36	20	8
Third party: reflection following complaints / critical incidents	6	55	21	34	84	11	14	17

Table 31: Average cost associated with time spends on each CPD. (Orthoptists – Speech & Language therapist, and aggregate for 'All Disciplines')

CPD Activities	Average cost associated with completing CPD activities (by profession) (£)								
	Orthoptists	Paramedics	Physio-therapist	Prosthetists/ orthotists	Practitioner psychologist	Radio-grapher	Social worker	Speech &Lang. therapist	All professions
Self-study: reading relevant articles, books, and policy documents	175	216	193	214	518	167	336	106	257
Self-study: viewing on line materials (excluding distance learning, e-le...	121	128	136	150	269	136	196	77	164
Self-study: reflection on practice, learning from experience, developing...	141	160	141	524	426	223	348	163	224
Additional roles: secondments, work shadowing, visiting other department...	44	405	52	144	69	119	153	175	129
Additional roles: representative on a committee, involvement with a prof...	109	28	48	187	401	61	94	22	89
Additional roles: mentor, coach, tutor, teacher, supervisor, assessor, p…	435	867	223	1044	490	401	389	242	413
Additional roles: research, project work, writing, discussing or reviewing...	108	19	75	184	303	180	62	19	110

Formal education: courses, conferences, seminars, workshops, learning ac...	124	178	166	249	219	124	271	119	169
Formal education: distance learning, e-learning modules	40	128	41	38	69	88	46	138	62
Formal education: quality improvement activity, in-service training	103	70	89	137	63	94	114	53	90
Formal education: higher education qualifications	181	119	94	95	177	91	222	130	126
Third party: reflection on feedback from appraisal	21	16	35	53	26	17	47	23	30
Third party: reflection on multi-source feedback (360 degree feedback)	7	5	8	10	9	6	15	0	8
Third party: reflection on patient feedback e.g. audit of service users	46	14	43	100	28	17	21	30	31
Third party: reflection following complaints / critical incidents	15	67	32	31	18	13	33	6	30

Overall, associating costs of the CPD activities provide a mechanism to understand the potential economic impact on registrants' time to complete the various activities under the current HCPC system. Furthermore, the monetary value serves to indicate the opportunity cost, whereby one may consider the value foregone elsewhere (e.g. service delivery) having spent time to undertake a CPD-related activity.

To fully consider the value of these CPD activities, it is also important to consider the perceived benefit to service and patients that may be gained from undertaking CPD. To examine the benefit that registrants place on undertaking CPD activities, survey respondents were asked the degree to which they perceived CPD activities 'led to service and patient user benefit'. Answers were indicated on a Likert scale (ranging from: 'strongly disagree', 'disagree', 'agree', 'strongly agree') and for reporting purposes, answers on the scale were weighted (0.25, 0.5, 0.75 and 1.0). Table 32 and Table 33 summarise average scores by profession of the perceived benefit from CPD activities.

Table 32: Reported level of agreement that CPD activities have benefit to patient/service user (Art Therapist - Operating practitioner)

CPD Activities	Benefits associated with CPD activities (by profession)							
	Arts therapist	Biomedical scientist	Chiropodists/ podiatrist	Clinical scientist	Dietitians	Hearing aid dispenser	Occupational therapist	Operating practitioner
Self-study: reading relevant articles, books, and policy documents	0.933	0.776	0.82	0.832	0.884	0.807	0.773	0.755
Self-study: viewing on line materials (excluding distance learning, e-le...	0.909	0.76	0.786	0.85	0.856	0.798	0.764	0.777
Self-study: reflection on practice, learning from experience, developing...	0.964	0.826	0.846	0.863	0.923	0.858	0.837	0.812
Additional roles: secondments, work shadowing, visiting other department...	0.9	0.806	0.731	0.889	0.882	0.729	0.841	0.767
Additional roles: representative on a committee, involvement with a prof...	0.75	0.731	0.8	0.788	0.848	0.75	0.773	0.734
Additional roles: mentor, coach, tutor, teacher, supervisor, assessor, p…	0.955	0.894	0.765	0.809	0.856	0.76	0.797	0.77
Additional roles: research, project work, writing, discussing or reviewing...	0.912	0.75	0.792	0.831	0.879	0.75	0.75	0.825
Formal education: courses, conferences, seminars, workshops, learning ac...	0.914	0.846	0.787	0.89	0.891	0.864	0.823	0.766
Formal education: distance learning, e-learning modules	0.875	0.817	0.778	0.7	0.844	0.833	0.696	0.732
Formal education: quality improvement activity, in-service training	0.85	0.859	0.875	0.863	0.892	0.863	0.863	0.78
Formal education: higher education qualifications	1	0.75	0.812	1	0.906	0.875	0.875	0.729

Third party: reflection on feedback from appraisal	0.921	0.636	0.812	0.781	0.838	0.732	0.812	0.692
Third party: reflection on multi-source feedback (360 degree feedback)	0.875	0.583	0.833	0.5	0.75	0.75	0.806	0.694
Third party: reflection on patient feedback e.g. audit of service users	0.895	0.75	0.795	0.938	0.845	0.767	0.737	0.821
Third party: reflection following complaints / critical incidents	1	0.854	0.806	0.896	0.885	0.75	0.739	0.786

Table 33: Reported level of agreement that CPD activities have benefit to patient/service user (Orthoptists – Speech & Language therapist, and aggregate for 'All Disciplines')

CPD Activities	Benefits associated with CPD activities (by profession)								
	Orthoptists	Paramedics	Physio-therapist	Prosthetists/ orthotists	Practitioner psychologist	Radio-grapher	Social worker	Speech & Lang. therapist	All professions
Self-study: reading relevant articles, books, and policy documents	0.847	0.771	0.84	0.801	0.879	0.812	0.815	0.904	0.825
Self-study: viewing on line materials (excluding distance learning, e-le...	0.821	0.762	0.827	0.777	0.852	0.814	0.811	0.898	0.814
Self-study: reflection on practice, learning from experience, developing...	0.863	0.83	0.865	0.862	0.939	0.83	0.884	0.932	0.87
Additional roles: secondments, work shadowing, visiting other department.	0.786	0.688	0.804	0.828	0.875	0.828	0.852	0.9	0.82
Additional roles: representative on a committee, involvement with a prof...	0.826	0.7	0.766	0.713	0.875	0.802	0.852	0.861	0.802
Additional roles: mentor, coach, tutor, teacher, supervisor, assessor, p…	0.838	0.833	0.859	0.772	0.914	0.843	0.882	0.908	0.844
Additional roles: research, project work, writing, discussing or reviewing...	0.842	0.75	0.812	0.75	0.8	0.865	0.848	0.844	0.825
Formal education: courses, conferences, seminars, workshops, learning ac...	0.89	0.875	0.839	0.875	0.862	0.843	0.845	0.938	0.857
Formal education: distance learning, e-learning modules	0.812	0.784	0.875	0.684	0.844	0.798	0.771	0.875	0.79
Formal education: quality improvement activity, in-service training	0.88	0.778	0.847	0.788	0.767	0.833	0.825	0.926	0.843
Formal education: higher education qualifications	0.864	0.8	0.859	1	0.75	0.864	0.844	.	0.844
Third party: reflection on feedback from appraisal	0.84	0.788	0.766	0.708	0.808	0.783	0.822	0.854	0.799
Third party: reflection on multi-source feedback (360 degree feedback)	0.75	1	0.692	0.625	0.812	0.821	0.823	1	0.765
Third party: reflection on patient feedback e.g. audit of service users	0.879	0.712	0.835	0.77	0.841	0.809	0.903	0.841	0.829
Third party: reflection following complaints / critical incidents	0.885	0.786	0.83	0.75	0.917	0.817	0.9	0.875	0.839

To summarise: The CPD activities utilised vary by profession, as does the time invested to complete them. The highest cost of CPD activities related to *additional roles (e.g. mentor, coach, tutor, teacher, supervisor, assessor)*.

Question 3. ***What are the cost-benefit ratios for each CPD activity and which CPD activities provide the best return on investment?***

The results so far indicate that CPD activities vary in cost and perceived benefits. The analysis makes the assumption that the registrants' decision to spend time on specific CPD activities is motivated by perceived benefit to service and patients. To consider these underlying decisions, the cost to benefit ratio for all CPD activities were calculated as follows:

$$Cost\ Benefit\ Rato = \frac{Cost\ of\ CPDActivity}{Benefit\ of\ CPD\ Activity}$$

To make these ratios intuitive, the *reciprocal* value of the four-point Likert scale is estimated (e.g. reciprocal value of scale of 0.25 will equal 4), so that a lower perception of benefit will result in a lower cost-benefit ratio associated with CPD activity. Using this approach, the highest values should indicate activities representing the best value for money and one can therefore rank cost-benefit ratio to inform potential CPD priorities. Aggregated across all professions, Table 34 summarises cost-benefit ratio related to CPD activities.

Table 34: Cost benefit ratio to indicate the relative value of CPD activities (aggregate across ‘All Professions)

CPD Activities	Cost/Benefit Ratio (£) mean [95% CI]	n	rank
Self-study: reading relevant articles, books, and policy documents	270 [233 - 307]	908	6
Self-study: viewing on line materials (excluding distance learning, e-le...	211 [173 - 250]	708	9
Self-study: reflection on practice, learning from experience, developing...	285 [239 - 330]	792	5
Additional roles: secondments, work shadowing, visiting other department...	375 [271 - 479]	297	3
Additional roles: representative on a committee, involvement with a prof...	254 [196 - 313]	326	7
Additional roles: mentor, coach, tutor, teacher, supervisor, assessor, p…	563 [491 - 636]	662	2
Additional roles: research, project work, writing, discussing or reviewing...	355 [263 - 447]	295	4
Formal education: courses, conferences, seminars, workshops, learning ac...	232 [191 - 274]	696	8
Formal education: distance learning, e-learning modules	161 [133 - 189]	301	11
Formal education: quality improvement activity, in-service training	177 [145 - 209]	474	10
Formal education: higher education qualifications	763 [527 - 999]	143	1
Third party: reflection on feedback from appraisal	82 [64 - 99]	322	14
Third party: reflection on multi-source feedback (360 degree feedback)	71 [57 - 84]	100	15
Third party: reflection on patient feedback e.g. audit of service users	101 [69 - 132]	286	13
Third party: reflection following complaints / critical incidents	134 [91 - 176]	218	12

Ranking indicated from cost benefit ratios allows inferences on the potential value for money. The three highest ranking CPD activities appear to be:

(1) '*Formal education (e.g. higher education qualifications)*' with £763 (95% CI: £527 to £999);
(2) '*Additional roles (e.g. mentor, coach, tutor, teacher, supervisor, assessor)*' with £563 (95%CI: £491 to £636), and;
(3) '*Additional roles (e.g. secondments, work shadowing, visiting other departments)* with £375 (95% CI: £271 to £479).

To summarise: these results suggest that favourable return on investments may be gained in focusing CPD activities on '*Formal education (e.g. higher education qualifications)*', '*Additional roles (e.g. mentor, coach, tutor, teacher, supervisor, assessor)*' and '*Additional roles (e.g. secondments, work shadowing, visiting other departments)*
One limitation of ranking cost benefit ratios is that cost and benefits are only reported by survey respondents who have undertaken that activity. This implies that those who did not do the activity cannot give it perceived benefit, however those that did, will be more likely to expect or perceive the benefit to be high. As a result, inference on these results requires caution and future research may benefit from focusing more on conducting an in-depth investigation into the value of CPD activities.

Question 4. *What is the relationship between CPD activities and allocated protected time?*

The cost-benefit ratio may help rank which CPD activities may be perceived to offer the greatest return on investment in terms of service and patient benefits. This raises the question as to whether these (high ranking) activities are considered undertaking when allocating protected time. To ensure that service users obtain potential benefits related to CPD activities, registrants should receive sufficient protected time to conduct the most beneficial CPD activities. This section examines which CPD activities explain the amount of protected time allocated to registrants.

To understand if certain which CPD activities significantly explain the amount of protected time allocated to registrants, negative binomial regression is utilised. To make the coefficients of CPD activities more intuitive (i.e. so that the outputs indicate the change in protected time for conducting the associated CPD activity), coefficients are expressed as

incidence rate ratios (IRR). Table 35 presents the regression outputs of the negative binomial regression.

Table 35: Negative binomial examining the amount of protected time provided by employers given indicated CPD activities (reported incidence-rate ratios)

CPD Activities	Incidence-rate ratios
Self-study: reading relevant articles, books, and policy documents	8.43 (4.68 to 15.19)***
Self-study: viewing on line materials (excluding distance learning, e-le...	1.3 (0.71 to 2.37)
Self-study: reflection on practice, learning from experience, developing...	3.16 (1.65 to 6.04)**
Additional roles: secondments, work shadowing, visiting other department...	0.61 (0.29 to 1.28)
Additional roles: representative on a committee, involvement with a prof...	0.91 (0.48 to 1.75)
Additional roles: mentor, coach, tutor, teacher, supervisor, assessor, p...	0.82 (0.45 to 1.52)
Additional roles: research, project work, writing, discussing or reviewing...	1.51 (0.74 to 3.07)
Formal education: courses, conferences, seminars, workshops, learning ac...	3.77 (2.2 to 6.47)***
Formal education: distance learning, e-learning modules	1.21 (0.62 to 2.34)
Formal education: quality improvement activity, in-service training	4.37 (2.65 to 7.22)***
Formal education: higher education qualifications	0.71 (0.29 to 1.71)
Third party: reflection on feedback from appraisal	1.18 (0.56 to 2.48)
Third party: reflection on multi-source feedback (360 degree feedback)	1.46 (0.47 to 4.52)
Third party: reflection on patient feedback e.g. audit of service users	0.82 (0.37 to 1.81)
Third party: reflection following complaints / critical incidents	0.57 (0.26 to 1.25)

Significance levels: *** p<0.001; ** p<0.01; * p<0.1

Four CPD activities were found to significantly explain the amount of protected time allocated to registrants. Examining incidence rate ratios, confidence intervals and significant levels suggest that:

- *Self-study (e.g. reading relevant articles, books, and policy documents)* is associated with an average increase of 8 minutes (95% CI 5 to 15 minutes, p<0.001) more protected time per month;
- *Self-study (e.g. reflection on practice, learning from experience)* is associated with an average increase of 3 minutes (95% CI 2 to 6 minutes, p<0.01) of protected time per month;
- *Formal education (e.g. courses, conferences, seminars, workshops) is associated with* an average increase of *4 minutes per month (*95% CI 2 to 6 minutes, p<0.001*) of protected time per month;*
- *Formal education (e.g. quality improvement activity, in-service training)* is associated with an average increase of 4 minutes per month *(*95% CI 3 to 7 minutes, p<0.001*)* of protected time per month.

Interestingly, Table 35 shows the above CPD activities were significantly associated with protected time. However, CPD activity with highest cost benefit ratios (with best outcomes for service and patient benefits) do not seem to influence protected time and results may suggest these seem more likely to be undertaken in the registrants' own time.
To summarise, protected CPD time is predictive of *self-study* spent on reading and reflection as well as *formal education*: course and quality improvement. In addition, the best cost benefit ratios were found for activities not undertaken during protected time, there were formal education, higher education additional roles i.e. mentor and secondments (see Table 8). Further investigation may be warranted to ensure that CPD activities provide favourable result on investment.

Question 5: *What are the CPD costs incurred by registrants and employers?*
Respondents were asked to indicate expenditure for completing CPD activities. Specifically, respondents were asked to indicate expenditure on four items: general administration, travel, attending courses and 'other' costs. Respondents were asked to input a monetary value to indicate expenditure either in terms of their own personal cost or costs covered by their employer. Table 36 summarises expenditure required to complete CPD activities over the last year. To apportion required expenses, individuals' personal spend was calculated as a total expenditure separate from employer spend and compared.

Table 36: Spend in pound sterling (£) on ‘general administration’, ‘travel’, ‘courses’ and ‘others’ required to complete CPD activities over the last year. This table summarises personal vs. professional costs, and indicates the ratio of personal spend as a proportion of total reported expenditure.

	Personal spend (£)					Professional spend (£)					Ratio	
CPD-related expenses	mean	min	-	max	n	mean	min	-	max	n	Personal Spend	n
General admin.	21	0	-	2000	793	19	0	-	1000	533	58%	314
Travel	108	0	-	15000	812	108	0	-	15000	647	60%	456
Courses	159	0	-	10000	824	285	0	-	20000	631	44%	396
Others	60	0	-	10000	745	45	0	-	10000	544	71%	170

Registrants report that employers pay, on average, less than half of most of the costs associated with CPD activities. On average, registrants reported paying 58% of general administration costs, 60% of costs associated with travel, 44% of the cost of attending training courses and around 70% 'other' sources of related expenditure.
To summarise, these results suggest that registrants are paying a major part of the costs associated with completing CPD activities.

Discussion

A substantial time investment is required to complete CPD activities, but these analysis estimates that employers allocate only 71 to 95 minutes per month of protected CPD time. Aggregated across all professions, the cost per year of allocated protected time ranges between £781 and £1,104. It should be noted that employers were providing protected time before HCPC introduced the process and therefore above estimates represent times and costs for which HCPC may regulate, and not any incremental change in CPD as a result of HCPC. Furthermore, *in service* training may count towards CPD, and therefore certain CPD activities may be completed outside of protected time and within working hours.
Registrants conducted a range of CPD activities and the amount of time spent completing these activities varied. Therefore, costs associated with completing CPD activities varied by profession. However, each profession seem to have idiosyncratic variation in CPD requirements, which might be related to service and patient benefits. Across all professions, the highest cost of CPD activities to registrants was incurred from providing *additional roles (e.g. mentor, coach, tutor, teacher, supervisor, assessor),* which was undertaken by 57%-81% of registrants (depending on profession).

Comparing the cost to benefit ratios of CPD activities across the professions suggests that three CPD activities may rank as representing better value for money: Formal education (e.g. higher education qualifications)', 'Additional roles (e.g. mentor, coach, tutor, teacher, supervisor, assessor)' and 'Additional roles (e.g. secondments, work shadowing, visiting other departments)'. These findings provide interesting insights that might be worthy of further consideration regards CPD priorities, given limited resources.
Regression analysis reveals that self-study and formal education are more likely to significantly explain reported levels of protected time. However, no CPD activity with a favourable cost-benefit ratio was significantly associated with reported protected time; this may merit further investigation.

Estimated costs to complete CPD activities were collected and the breakdown between registrant and employer was examined. It would appear that the registrant pays for approximately half of their CPD costs (i.e. general administration costs: 58%; travel: 60%; courses: 44% and other: 70%).

Conclusion

Continuing professional development (CPD) regulated by *Health and Care Professions Council* (HCPC) has been found to require substantial investments from registrants and employers, and the analysis suggested most of the time and cost investment is incurred by registrants personally. Analysis of associated costs and benefits of activities suggests that prioritising CPD activities may have merit. Currently HCPC does not specify any amount of time required to complete CPD and offer flexibility to accommodate availability of training in varying geographic location. These results may indicate additional protected time required to ensure CPD activities with the highest ranked cost-benefit ratio might be delivered. For example, aggregated across all professions, the choice to allocate *formal education (e.g. higher education qualifications*) as a CPD activity would require on between 12.5 to 20.9 (mean: 16.7) hours per month. Whilst investing in these CPD activities may be perceived as substantial, reported perceived benefit to service and patients seem to indicate that such an allocation may represent best value for money.

Recommendations

- CPD activities currently rely on significant investment from registrants own time. HCPC should advise employers that an appropriate level of protected time should be provided within working hours and consider identifying the correct time allocation in order to gain benefit for patients.
- HCPC should advise on the best use of protected time for CPD to offer the best return on investment

Limitations

Benefits of CPD activities have been measured on a four-point Likert scale and future analysis may consider measuring perceived benefits on a continuous, interval scale.
The notion of protected time implies an employee and employer relationship. However, certain professions (e.g. chiropody and podiatry) are have a greater likelihood of operating as sole traders and therefore protected time may be interpreted in a different manner. Further investigate may consider the implication of private-public mix on CPD.

It is not possible to determine whether the current list of CPD activities are considered mutually exclusive by registrants. Defining CPD activities may require further investigation to facilitate monitoring their implementation and benchmarking their outcomes.
There were low sample sizes within some professional groups of registrants and as a result estimated costs and perceived benefit have reduced precision on this analysis.
Registrants who report undertaking certain CPD activities are more likely to report the activity being worthwhile, however those who did not report the activity were unable to comment on it. Results in this section need to be viewed with the caveat that findings are based on perceptions from participants.

Further research

Furthermore, future research may seek methods to examine the causal relationship between CPD activities and patient health outcomes or service efficiency; analyses presented here may help inform future research.

Furthermore, current estimates of HCPC cost of regulating CPD are based on the opinions of HCPC and an internal audit might provide a more accurate estimate of this cost.

Finally, CPD activities take place in either protected time, in service or outside of working hours and to ensure CPD are not a burden to registrant, future systems may monitor CPD in real-time (i.e. as completed) providing rich dataset to examine the relationship between CPD activities outcomes (e.g. if data linkage between CPD system and patient-level data were feasible).

This section provides qualitative examples of patient benefit from the open text question on the survey. The top three and bottom four ranked CPD activities are illustrative of best and worst cost benefit ratio.

The following section provides quotes from the open text survey question (Q33. Please provide an example of one CPD activity you did, clearly describing how it led to service user/patient benefit? (including improved care, patient experience, safety) asking registrants for examples of when CPD had improved care, patient experience and safety.

Results in the cost effectiveness section suggest that there are three CPD activities which have been ranked as representing the potential best value for money: *Formal education (e.g. higher education qualifications)', 'Additional roles (e.g. mentor, coach, tutor, teacher, supervisor, assessor)' and 'Additional roles (e.g. secondments, work shadowing, visiting other departments*)'.

The four lowest ranking activities offering best value for money have been suggested to be: *Third party: reflection on feedback from appraisal, Third party: reflection on multi-source feedback (360 degree feedback), Third party: reflection on patient feedback e.g. audit of service users, and Third party: reflection following complaints / critical incidents.*

Open text survey comments were downloaded from Survey Monkey into an Excel spreadsheet for ease of analysis for this section. Registrants' quotes on their experiences of CPD were then filtered depending on the type of CPD it fitted in to.

We received entries from 649 registrants who gave examples on how a CPD they did led to patient benefit. Below is a selection of quotes grouped by the CPD activity for the top three ranking CPD activities for best value for money and the bottom four CPD activities representing best value for money:

Ranked first CPD activity as best value for money

Examples of CPD Activities: 'Formal education: quality improvement activity, in-service training'

I have undertaken a fully self-funded, non-seconded MSc in Play Therapy which is entirely relevant to my work. I have used the module learning on attachment and child development as well as play in my training of prospective adopters, adopters and in the matching and post adoption support planning for families. The feedback for the training provided has been

consistently excellent and the one to one work provided to families has resulted in stabilised placements and parents feeling more equipped to parent their adopted child. I have also done direct work with two placed children and one birth child over the last year despite this being outside my remit when they have been in crisis. These children have settled better as a result. The knowledge gained has stood me in good stead in the family finding process and in working with placing authorities to produce a comprehensive post adoption support plan. This additional study has been invaluable to my role as a social worker and I have been able to share that knowledge with my colleagues.

Completing a Masters in Service Improvement at the present time. Which is improving all aspects of the patients journey, including, safety, wellbeing, experience, referrals to other agencies/groups. Giving more time and understanding to the patient about their condition. The response from the service users experience is very positive.

I attended multiple professional conferences and CPD workshops throughout the last 12 months. For example, completing the [name of course] has improved my therapeutic handling, provided me with ideas for possible treatment strategies and increased my understanding of neurological physiotherapy theory.

Ranked second best CPD activity as representing best value for money

Examples of CPD Activities: 'Additional roles: mentor, coach, tutor, teacher, supervisor, and assessor'

I completed the Best Interest Assessor module of the Advanced Practice in Social Work Masters' Degree. I wanted to do this course anyway as I want to progress in my practice and career so the CPD portfolio had no bearing on my decision or training. My Local Authority funded the course as they need more BIA's working for the local authority so luckily it did not cost me anything. Being a qualified BIA does benefit the service users as the local authority can now complete more Deprivation of Liberty Safeguards assessments and ensure service user's placements are properly and legally arranged.

Looking at NHS Hospital food standards and trying to get an action plan /engagement with our trust. I put together a pro forma and reviewed evidence and action needed and this has started dialogue and progress. We are now developing a e-learning nutrition programme and talking to commissioners about a CQUIN

While preparing a teaching/mentoring session for a student on patient assessment and in particular to respiratory assessments, I became aware that my skills and knowledge contained gaps. Using text reference (Macleod's) and various online resources including 'you tube' patient assessment videos, I began to have a more in depth understanding of some aspects of these assessments. While some could be considered more primary care tools than emergency care, our role is changing and I found these resources very useful in increasing my level of knowledge. I have since studied more systems assessments in the same way. This has allowed me to do 3 things: Improve my patient assessment techniques, becoming more thorough. Pass this knowledge on to my students Communicate more effectively my findings to other Health Care Professionals when handing over care or referring patients on to other pathways.

Ranked third best CPD activity as representing the best value for money

Examples of CPD Activities: 'Additional roles: secondments, work shadowing, visiting another department'

Went to another hospital with same equipment. They had an additional setting on the image quality setting which changes contrast and brightness settings for a heart consultant performing a procedure on large BMI pts which improves the image quality. I asked if I could use these settings and it is now incorporated within our local equipment in the event of large BMI pts which helps our doctors to visualise anatomical structures without the need to increase radiation dose. Better care improved outcomes and less dose as a result for a select group of pt population.

Took on a secondment which was in effect a temporary promotion. This has given me a wider picture beyond my own caseload of the work coming in and the needs of service users, enabling me to better prioritise work.

Improvement in our service started with myself shadowing a colleague at a different hospital, attending their Stroke clinic on several occasions. I also joined the BIOS Stroke SIG for formal education. Following some self-directed learning, and clinical experience gained, a training package was made to help and guide clinicians on the stroke ward where and who to refer to our new Stoke Service at our fellow hospital. This has meant patients' receive the same eye care as at the first hospital. There is a direct referral process in place, and we have set guidelines and protocols for this purpose. Shortly we will undertake an audit of our services to ensure our aims are being met.

Reviewed NICE guidelines in relation to head injury and interpreted these to adapt a Trust post fall protocol. This has now benefitted the patient as there are clear guidelines which indicate whether a patient requires a CT head scan and within what timescale this is required following an in-patient fall

... Work shadowed a colleague on use of coloured filters. Now offer colour overlays to stroke patients with reading problems which enhances their quality of life post stroke, patients report back that very helpful especially in early stages post stroke. Plan to audit which overlays patients find most helpful as have noticed tend to choose yellow or green. Will also contact stroke special interest group before starting audit to discuss.

Ranked as the bottom four CPD activities representing the best value for money:

Examples of CPD Activities: 'Third party: reflection on multi-source feedback (360-degree feedback)'

ASYE - direct observation by practice assessor. Using the reflective feedback session afterwards I was able to identify areas for improvement in my interaction with children which I went on to improve and continue to do so.

I have a managerial role so I asked a range of staff and colleagues to give me feedback on my performance and how I supported them. I then wrote a reflective piece and action plan as a result of their comments

Examples of CPD Activities: Third party: reflection on patient feedback e.g. audit of service users...

Registrants provided scenarios in the written text section of the survey on how third party: reflection on patient feedback e.g. audit of service users had had an impact on their practice and improved patient outcomes.

Carried out patient satisfaction questionnaire, analysed results and presented to department. As a department we discussed and reflected on areas where improvement was required and how we could achieve this. New ways of working were implemented.

I conducted a survey on extended hour's provision, seeking user feedback on current service hours and reasons for suggestions. This led to a change in clinical working hours based on evidence, to improve the patient experience and satisfaction with the care provided.

A departmental review of information leaflets given to patients - looking at examples from other departments. As a result of this, our information was redesigned to allow it to be used in a number of formats, e.g. written information including large print leaflets, autism friendly information, online access to documents. Patient feedback was obtained from this, and adaptations made to the information. Patient experience was enhanced as a result, and safety was increased as updates were made to contact details etc. so patients can contact us more easily for queries.

I initiated and ran an audit (with a research assistant) of service-user experience. We surveyed literature to design an appropriate questionnaire, sampled patients continuously for a month, and collated the results and fed back to the team. As a result changes were made to a number of aspects of patient visits to our centre, from providing more information each time someone visits, to putting up a sign about the Trust's free Wi-Fi in our reception area. Patients commented about how quickly we had responded to the feedback.

Completed a patient satisfaction audit highlighted desire of patients to have improved continuity of clinician and importance of this to patient we were able to implement a new system to see improved continuity of care

I successfully introduced an electronic record of an ongoing audit system for IRO's, this would inform the IRO that care plans were on track or not, and what to do next. This will continue to benefit children and help social workers keep on track

I don't view CPD as a separate activity, I am always seeking to improve my patient and the overall service experience and constantly seek evidence to ensure I am up to date and can base improvements on best evidence. I see that I should always be trying to develop as a practitioner and I see every teaching session I deliver as an opportunity to listen to others ideas, reflect together on practice and develop together - I don't see the need to 'ring fence' and sit down to 'do my CPD'.

Examples of CPD activities: Third party: reflection following complaints / critical incidents

One of my main responsibility is to plan and chair Looked-After Children's Care Plan review meetings. Review the plan, assess, monitor the service provided to Looked-After Children. An example was where the Health Visitor has repeatedly failed to attend review meetings ...There was no health report available to the review meeting; neither was the Red Book

completed on the immunisations this baby had or visits with the Health Visitor. I recorded my concerns in my reports and made a specific recommendation for the child to be seen by the Health Visitor within a time-scale, requesting that a copy of the report is sent to me as Chair prior to the next review meeting. This precise action did serve to improve the quality of care for this baby.

Following a serious case review a few years ago, where day services came out reasonably well but there were short comings in joined working, changes have been made. I've lead on some of these changes and through implementing these and I've learned a lot about supporting vulnerable adults with learning disabilities and joined working, and our (my) responsibilities. Seeing these changes put into practice when someone had serious health concerns resulting in hospital admission proved to me how effective these changes have been. Changes have included a) daily reporting of health concerns by the day service to both care management and managers in health teams b) more regular meetings with health and care management to put these changes into place, with actions from the meetings being written up and followed up in between and at the next meeting. c) (this might have happened anyway but has massively contributed to the change) physiotherapists training day service workers in theory and practice of carrying out physiotherapy, with assessment of key day services team members, with some being able to lead and some being able to support and day services running physiotherapy groups… these changes have led to huge improvements in understanding and practice, everyone being clearer about their own responsibilities and their own and each other's roles and reduced sickness levels. Happier teams and very vulnerable service users who are receiving the right support and benefiting from it.

The above quotes illustrates examples of CPD activity which have been ranked as the best value and the least value in terms of cost benefit for the user and serve to illustrate how the CPD standards have benefited service and patients.

8. Discussion

This study provides an in-depth analysis of the current HCPC CPD and audit system that forms part of the HCPC continuing fitness to practise system. The research has engaged a comprehensive mixed methods approach to answering the research questions which involved five work streams: a literature review, a review of CPD profiles, interview data from a range of stakeholders (HCPC council members, employers, CPD profile assessors and registrants), an online questionnaire of registrants, and an analysis of the costs of the HCPC CPD and audit system.

1) ***What is the impact of the HCPC's CPD standards and audit on registrants*****?**

Both the interview and survey data supported the view that the main impact of the CPD and audit system has been to drive up professionalism and re-focus CPD on producing a change in practice and benefit for patients.

The literature review indicated that CPD could drive up practice and benefit patients when there is organisational and management support in place (Laprise *et al.,*, 2009), however without this effects are likely to be small and short term (Forsetlund *et al.,*, 2009; Mansour and Lockyer, 2007). The literature review also raises questions about the direction of causality of CPD and high levels of performance; are good practitioners more conscientious about completing CPD or does CPD drive performance improvement (Goulet *et al.,*. 2013). It is difficult to demonstrate a causal relationship (Mathers *et al..,* 2012), but to improve the evidence base Mathers *et al.,* suggested linking CPD to Human Resource (HR) systems to manage organisational knowledge more effectively, and to encourage the use of routinely collected data to evaluate impact.

The data we collected indicated that the HCPC Standards one to four were viewed positively, which is particularly vital for employers and registrants. The Standards, although considered quite general, were viewed as largely adaptable for each profession and setting, which is an important consideration for the HCPC who regulate 16 professions. Some challenges identified were mainly focused on registrants who did not have direct patient or service user contact, and therefore they needed support to think more widely about how to apply the Standards to their post.

2) *What do the HCPC and registrants perceive the benefits and disadvantages of this approach to be?*

We considered the strengths and weaknesses of the CPD and audit system. Strengths included: developing a culture whereby CPD was considered part of regular practice; driving up standards of practise and continuously updating skills. This was particularly the case for younger registrants, who were trained to reflect on their practise and seek to continue their learning throughout their career. A particular strength of the system is the focus of Standard 3 and Standard 4 which seeks to demonstrate change following CPD and demands deeper engagement with CPD compared to other models i.e. collecting points for hours spent in CPD. We noted the change from a passive learning role, attending sessions and listening, to an active role attending sessions and then thinking about how best to utilise that knowledge and take if forward into practise.

Standard 4 goes even further by asking registrants to seek to ensure their CPD benefits the service user. Our literature review helped us to understand how and when learning is transferred to practise (Kirwan, 2009) and explain what hinders the transfer of learning. So much needs to be in place to support this transfer. Key factors are the motivation of the individual and the support of the organisation including managers and peers to both support and facilitate that change. The assumption is that registrants are continuously updating their knowledge and skills and linking it to practise and patients.

However, we were able to collect data from an optional item at the end of the online survey where registrants were asked to '*provide an example of one CPD activity you did, clearly describing how it led to service user/patient benefit? (including improved care, patient experience, and safety*)'. We received 649 responses to this optional question. Some of the examples were very brief, but the majority provided examples which clearly demonstrate how CPD led to improvements in clinical effectiveness, patient safety and patient experience. We expect that healthcare professionals take pride in these improvements and they are important areas of job satisfaction which contribute positively to feelings of self-efficacy and value.

In addition, the economic analysis was also able to use registrant ratings linking CPD to service and user benefit to calculate what types of CPD had the best cost benefit ratio. We identified that the top CPD activities which created the best value were *formal education* (e.g. higher education qualifications); *additional roles* (e.g. mentor, coach, tutor, teacher, supervisor, assessor) and *additional roles* (e.g. secondments, work shadowing, visiting other departments). This finding may be worth exploring in further research and employers may

wish to consider investing more CPD time on these activities, given their potential return on investment.

What do the HCPC and registrants perceive the disadvantages of this approach to be?

The main perceived weaknesses of the CPD and audit system were around its purpose and intention and how it linked to continuing fitness to practice. It is clear that the HCPC use the CPD and audit system as a means to drive up practice, but this forms only part of the continuing fitness to practice system. The assessment of continuing fitness to practice is largely based on the registrants self-declaration form and is focused at the individual registrant who signs a declaration confirming that they continue to meet the standards. The HCPC places trust in the individual to complete this declaration honestly.

"Registrants make a declaration that they have read and will comply with the standards of proficiency, conduct, performance and ethics and that they have read and will comply with the standards for CPD" (HCPC, 2009)

Separately, there is much research in the field of medical education that has shown self-assessment to be unreliable (Colthart *et al.,* 2008), this is particularly the case for people who are under performing. It may not be a case of dishonesty as such, more a case of lack of self-awareness and an inability to correctly self-assess. On the basis of this finding, a proportion of registrants will self-declare as meeting the standards when in reality they do not. This leaves the HCPC with a system that is not joined up with the employer system and staff appraisal. Any identified concerns over competence are entirely dependent on the HCPC receiving allegations of misconduct. The quote below, taken from open comments section on the online survey about the HCPC CPD system, highlights the problem.

"*I have a very poorly performing member of staff who was called for audit. She tried to defer as she had been off sick. This wasn't agreed so she had to submit. She borrowed work from staff who had previously been audited and persuaded other staff to help her and they did. She shouldn't have passed, her practice remains poor and I am having to manage her through competency"* (Senior Female Dietician)

Clearly without the requirement to provide any externally validated documentation, registrants can complete a positive self-declaration form and present a CPD profile which appears to meet the minimum standards, when this might be in conflict with the employers view. The lack of a requirement to have third party validation was identified from data from

council members and assessor interviews, who noted this was an area in need of improvement. We note that other regulators (e.g. GMC, NMC) incorporate evidence from appraisal or confirmation from a line manager as part of their continuing fitness to practice system and therefore the HCPC is unusual in relying on an entirely self-assessment process.

The economic analysis identified that few registrants included third party evidence in their CPD profiles, but when they did it was low on time and cost, and would be inexpensive to include. However, the literature review highlighted that CPD was often perceived as attending courses. This may explain why registrants have not included third party evidence in their CPD profiles. This suggests that registrants need to be directed to include third party evidence.

The CPD and audit system alone cannot assure continuing fitness to practice. The CPD and audit system is part of a wider continuing fitness to practise system but the CPD and audit system is focused on ensuring registrants have met the CPD Standards, but this excludes any consideration of conduct and professional competency from the employer perspective.

The main discourses of our research were focused on registrants meeting the CPD and audit Standards and the potential to use this system to drive up practise, and we found evidence to support this. However, a secondary discourse which emerged from the data was about fear of de-registration and an awareness that the CPD and audit system was part of a wider system of continuing fitness to practise that included the potential to end someone's registration. Further clarification about the aim of the CPD and audit system and how it fits in to the wider context of continuing fitness to practise would be helpful, particularly for the benefit of registrants but also to assure the public.

CPD profile assessors expressed concern that the HCPC were too generous with registrants who submitted CPD profiles that were borderline or below minimum standards and thus required further information. They commented that sometimes requests for information went on for over two years. The HCPC response seems to assume the registrant has met the Standards, but has not evidenced it. Hence requests are made by the HCPC to revise submissions and improve the CPD profile, rather than after several requests to accept that some registrants have not engaged in CPD in the previous two years and cannot meet the Standards. The continual request for further documentation could be interpreted by some registrants as an invitation to invent evidence that does not exist. This suggests the HCPC should review this part of the audit system.

3) ***What can be identified from the literature, HCPC and registrants on the impact on practice, and risks that are being mitigated by the CPD standards and audits?***

The third question we posed was focused on the risks that are being mitigated by the CPD standards and audit (impact largely discuss in question one above). The literature review identified evidence that high performers were more likely to engage in higher levels of CPD and those with fewer hours of CPD was associated with poorer practice (Goulet *et al.,* (2013). However, CPD hours lacked sensitivity and specificity, as 34% of those with the least CPD were also in the group with the highest ratings for clinical performance.

The HCPC CPD and audit system is at the self-assessment end of the risk continuum of ensuring fitness to practice (revalidation being at the other end) (PSA, 2012). A system based on self-assessment is clearly less expensive than one requiring several levels of external evidence and sign off such as in medical revalidation. The HCPC have commented that the proportion of registrants sanctioned by the HCPC are similar to those sanctioned by the GMC and given the intense scrutiny involved in medical revalidation, it seemed to be no more effective at identifying poor performance than the HCPC's system. However, in a very recent report on medical revalidation Archer *et al.,*. (2016) reported that a tenth of appraisers had formally escalated a concern about at least one of their appraisees, indicating medical revalidation has introduced a higher level of concern.

However, as stated above there is extensive research to highlight the weaknesses of self-assessment (Colthart *et al.,*. 2008) which is known to be unreliable particularly for people who are under performing. A system reliant on self-assessment and lack of third party evidence increases the risk of signing registrants off as meeting the minimum Standards based on their own assessment which maybe be lower than the minimum Standard. The PPI group added that they had less confidence in a system based on self-assessment and thought third party evidence should be included

The opportunity for registrants to continuously drive up their own practice (as required by the CPD and audit system) was clearly seen as a carrot by the HCPC to encourage registrants to engage with the CPD Standards. However, some registrants clearly saw the audit more as a stick than a carrot. Although, they did acknowledge that without that threat of deregistration, they would be less inclined to engage in CPD. The main reason for anxiety related to audit selection was a heavy workload, an issue also highlighted with regard to the collation of CPD evidence, where the majority reported doing this in their own time.

The HCPC have considered targeting CPD audits at professional groups who are known to have more concerns raised against them. For example, paramedics and social workers as well as registrants with characteristics that may indicate a potential concern e.g. senior in age or lone practitioner. This targeted approach is likely to identify an increase number of registrants who have not engaged with CPD, but may not result in more sanctions being applied. When we analysed the CPD profiles of registrants who had concerns raised again them, at least to a level two, we did not find clear markers in CPD profile submissions that could be related to poor professionalism. This suggests that poor engagement with CPD and having professionalism concerns raised against registrants are not necessarily related, or if they are, the current CPD and audit system is not able to detect them as it is focused on self-assessment and self-reports of CPD activity.

Employers questioned the value of the 2.5% selected for audit. Commenting that the sample was too small to have an impact on the larger group of registrants, and ensure participation in CPD, as most have never been selected for audit and do not know anyone who has. The range of evidence collected from this research: interviews, survey and examination of CPD profiles indicated that the audit sample, could not additionally identify registrants with performance concerns, it was focused on positively encouraging CPD. A view endorsed by the PPI group at the third meeting on 1st March 2016.

4) *What improvements can be identified to enhance the existing system?*

Feedback verses feedforward

Most of the data on potential improvements to the CPD and audit system was identified from the interview data. The lack of any personal feedback following submission of a CPD profile was identified as being a potential de-motivator following audit. We noted providing feedback to registrants following audit was a recommendation from previous research for the HCPC (QA, 2015). The registrants received confirmation that they had met the Standards, but no other information. Assessors reported that at times they felt frustrated by this, particularly when a registrant had made a great effort and when CPD profiles were borderline. However, as a regulator the HCPC see their role as assuring the minimum standards have been achieved, they are reluctant to provide any grading or personal feedback given the necessary costs this would incur.

However, there is strong evidence in the field of medical education research (Bok *et al.,*. 2013; Hanson *et al.,*. 2013; Van der Vleuten, 2014) that qualitative feedback is at the heart

of assessment and drives up performance. For example, less focus on what has been achieved, and more focus on what to do next, less feedback and more feedforward. Boud (2013) refers to true feedback as closing the loop, that recipients agree a plan of action or change before feedback can be said to have taken place (Boud, 2013). Boud argues that much of what is called feedback is in fact justification of grades rather than focusing on next steps.

For example, “Well done, you have passed the Standards. Thank you for submitting your CPD profile. At times we found it difficult to assess as you provided a limited range of activities and evidence. We can see you are trying to engage with CPD and it's been a challenge for you. Can we advise you to take a little time to look at the HCPC website and familiarise yourself with the examples of CPD evidence we have posted there. Hope this helps you for the future.”

Improve the trustworthiness of CPD submissions

Findings from both the interviews and the survey free text comments highlighted that a system which accepts CPD submissions based entirely on self-assessment is vulnerable to potential fabrication. Ideally the profiles should be signed off as a true record by a line manager or relevant third party in the case of independent practitioners. Respondents and the PPI group both commented that the lack of any third party evidence leaves the CPD system vulnerable to the potential of registrant fabrication of CPD.

In addition, evidence of professional practice using a multisource feedback tool, possibly once per two years, should be included when available. Many organisations already have this in place, as well as appraisals. Therefore, submitting this type of evidence should not be considered too demanding. Independent and lone practitioners often operate within a supervised system and should be able to gather some validated evidence.

Website examples of CPD profiles and online portal

We recognise that some registrants were not clear about what was required and what a good CPD submission looked like. We suggest the HCPC consider adding further information to the website to increase transparency. An online portal was also suggested to support registrants to log all CPD activity in the required format (linked to standards) and ensure some consistency across professions.

5) ***What are the estimated costs of the current system to the regulator, to employers and to registrants?***

The economic analysis identified that the running costs of the CPD and audit system to the HCPC organisation was £4.3 million, this was made up from £4.05 from each registrant (4.5% of the registration fee). The CPD cost to the employer (of protected time provided to staff) was approximately £929 per year. Registrants reported that on average employers paid less than half of most of the costs associated with their CPD activities (course fees etc.) and the short fall was met by registrant themselves.

The analysis on best return on investment, identified 'Formal education (e.g. higher education qualifications)', 'Additional roles (e.g. mentor, coach, tutor, teacher, supervisor, assessor)' also most costly and 'Additional roles (e.g. secondments, work shadowing, visiting other departments) as the best investment. These activities tended not to be undertaken during protected time. Those with protected CPD time were more likely to spend this time on reading, reflection or in formal education. Further research may be helpful to ensure that CPD activities provide a good return on investment.

Limitations

The online survey achieved only an 11-15 per cent response, which is in line with other HCPC surveys, but nonetheless represents a low response rate. Also some professional groups were over represented. Only 63 CPD profiles were examined to explore any relationship between fitness to practise and CDP profiles. This was the entire population (21) who had experienced both system and compared to 42 controls, but nonetheless the sample was small and this limited exploration of any potential relationship. The cost-benefit analysis involved data based on registrant perceptions, and therefore results from this section need to be viewed with caution.

Conclusion

The HCPC CPD and audit system together with the self-declaration assessment form the basis of continuing fitness to practise for registrants. Both are currently entirely reliant on self-assessment. We have considered this alongside medical education research that shows self-assessment to be unreliable, particularly for those who are under performing. The HCPC system is operating in parallel with the employer appraisal system and we would suggest that these two systems are joined up, without repetition, but feed into each other thus ensuring real practice is part of assuring fitness to practice. We have made a range of recommendations that have come from this research.

Recommendations

1. To review the HCPC continuing fitness to practise system with regard to joining up the HCPC system with existing parallel systems of staff appraisal. This would ensure congruency and increase the robustness of a system which is currently based entirely on self-assessment. We anticipate this would increase public confidence.

2. To further clarify, for the benefit of registrants, the primary aim of the HCPC CPD Standards is to drive up the quality of practice and not to identity poor performance.

3. To consider creating an online facility to enable registrants to log CPD activity and support an audit-ready philosophy.

4. HCPC should consider contacting employers when registrants are invited to be audited, and request that time be provided to ensure registrants have time to compile their CPD profile and continue to be registered.

5. To request that as a standard, all CPD profiles should be validated by a line manager or include third party evidence.

6. To limit the number of times a registrant can be asked for additional evidence to meet the HCPC CPD Standards.

7. Consider providing qualitative *feedforward* advice following audit submission.

8. HCPC should advise employers that an appropriate level of protected time should be provided within working hours.

9. HCPC should advise on the best use of protected CPD time to offer the best return on investment.

Further Research

- More research to focus on the best value CPD that produces benefits for the user.
- Consider adding regular survey feedback for audited registrants

  - Examine the causal relationship between CPD activities and patient health outcomes
  - Conduct an internal audit to accurately assess the costs of CPD.
- The PPI group suggested research should be conducted on the reasons for voluntarily de-registration.

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10. Appendices

Appendix 1 Abstract Instructions

1. **Use the excel file "COMBINED SEARCH MASTER" found in S: EOF/Search documents/EOF main**
2. **Look for your batch in "abstract reviewer" column (O)**
3. **Review the papers and update excel using the following coding:**

Decision code (the green column K)

1 = Include

2 = Exclude (please provide reason code)

Reason code (column L)

1 = Not empirical research

2 = Single case study only

3 = No education or training intervention

4 = No evidence of patient outcome (KP Level 4b)

5 = Intervention not directed at healthcare/social care staff

6 = Other (please describe briefly)

Background / Follow-up (column M)

3 = if background reference (describe why in notes and link to relevant domain if possible, see below)

4 = if for follow-up (provide further details in notes and link to relevant domain if possible, see below)

Leave blank if neither

D1 = if Excellent Education

D2 = if Competent and Capable Staff

D3 = if Flexible Workforce Receptive to Research and Innovation

D4 = if NHS Values and Behaviours

D5 = if Widening Participation

Notes

Add additional information, if required: **save file (without changing file name) in S: EOF/Search documents/EOF main / COMBINED SEARCH MASTER**

Appendix 2 Data Extraction Form

Paper ID:	**First author:**	**Year:**	**Reviewer Initials:**	**Key paper to share?** Y ☐

Decision Code and Reason Code		**Comments/Notes** (Excluded papers only)
1 = Include *2 = Exclude* *[**PROVIDE REASON CODE FOR 2**]* ***DECISION CODE….***	*1 = Not empirical research* *2 = Single case study only* *3 = No education or training intervention* *4 = No evidence of patient outcome (KP Level 4b)* *5 = Intervention not directed at healthcare/social care staff* *6 = Other (please describe briefly)* ***REASON CODE: ……***	☐ *Background ref (state why important and what to look for in re-reading)* ☐ *Follow-up (describe, e.g.. look for future results)*

Please provide brief summary in prose. Refer to full paper review guide.

Overall summary *(including country, setting, population / sample size, aim of paper, design and methods, limitation and consider rigour)*

Education/Training Intervention and Outcomes

Context and Mechanisms

Effect on Patient Outcomes *(Tick all that apply)*	**Patient outcomes *(tick all that apply)***
Intervention effects on patient outcomes *No change* ☐ *Negative change* ☐ *Positive change* ☐	*1: Patient / carer / service user Experience* ☐ *2: Effectiveness (improved treatment / service)* ☐ *3: Patient Safety (reduced harm)* ☐

EOF DOMAIN (Tick all that apply)

D1: Excellent education ☐
D2: Competent and capable staff ☐
D3: Flexible workforce receptive to research and innovation ☐
D4: NHS values and behaviours ☐
D5: Widening participation ☐

Is it CPD? (for HCPC project)	Y ☐	*N* ☐

What does this paper add to our theoretical understanding of the transfer of education/training for patient benefit?

Additional References to follow-up (Please find and review additional references and add to excel database)

Other comments

Appendix 3 Embase Search

Concept	Search terms
Education (28)	(educat* or train* or Continu* Professional Development or simulation or degree* or diploma* or undergraduate* or postgraduate* or supervision or appraisal* or mentor* or CPD or significant event analysis or reflective practice or retrain* or curricul* or workforce diversity or workplace diversity or workplace learning or peer learning or peer teaching or credential* or qualif* or induction* or orientation* or performance review* or work-based learning or quality improvement).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
Patient outcome (40)	(patient outcome* or client outcome* or service user outcome* or length of stay or mortality or morbidit* or duration of illness or cure or incidence or prevention or medica* errors or complication* or patient satisfaction or patient adherence or readmission* or avoidable harm or adverse drug reaction* or quality of care or adverse event* or health outcome* or quality of healthcare or health behavio* change or admission* or prevalence or survival or patient benefit* or patient experience* or patient safety or quality of life or Prevent* harm or ROMS or routine outcome measure* or PROMS or patient reported outcome measure* or Re-enable* or Rehabilitat* or user satisfaction or social isolation or care pathway* or failure to rescue).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
Healthcare profession (60)	(((allied health professional* or anesthesiologist* or anaesthesiologist* or anaesthetist* or anesthetist* or art therapist* or attending* or biomedical scientist* or Chiropodist* or Clinical scientist* or dentist* or Dietician* or doctor* or Family physician* or General Practitioner* or GP* or Healthcare Assistant* or healthcare practitioner* or healthcare professional* or Hearing aid dispenser* or interdisciplinary or intern or interns or internship* or interprofessional or midwife* or multidisciplinary or nurse* or Nurse practitioner* or Occupational therapist* or Operating department practitioner* or Orthoptist* or Orthotist* or paramedic* or pharmacist* or Physical therapist or Physician* or

	physiotherapist* or podiatrist* or practitioner* or Prosthetist* or psychologist* or Radiographer* or registrar* or senior house officer* or SHO* or social worker* or specialty registrar* or Speech therapist* or Surgeon* or consultant* or health visitor* or preceptor* or Psychiatrist* or clinical supervisor* or educational supervisor* or ophthalmologist* or optician* or speech) and language therapist*) or resident*).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
Limits	limit 12 to (english language and yr="2004 -Current" and (article or journal or report or "review" or trade journal))

Appendix 4: Table of included papers

Author and date	Country, setting, Health Care Professional and Kirkpatrick level of evaluation	Design	Outcomes	Key points
Barba, Fay 2009	USA Gerontology nurses Kirkpatrick level 4b	Describes a collaborative participatory blended learning programme with workshops and online element 12 CME credits Train the trainers and leadership element to build training and change capacity	Evaluation of reflective learning journal, action plans for 3 to 6 months to integrate learning with practice, and undertake a work-based QI project to implement a best practice guideline. Baseline and follow up assessment of the work-based project to assess change in policy, procedure or nursing practice.	Implementation of the work-based project was supported by academic and hospital based mentors, and administrative staff. Examples of changes: Reduction in falls following changes in decor to provide sensory signals. Reduction in falls through identifying high risk patients with decorative markers Staff awareness programmes challenged attitudes towards elderly patients and encouraged a person centred approach. Musical reminders to turn patients at risk of pressure sores and encourage sleep patterns. Review to remove inappropriate medications Identification of community resources to prevent readmissions Others resulted in improved nutrition and pain management.
Bradley , Drapeau, DeStafano 2012	Canada Clinical Psychologists Kirkpatrick level 1	Survey. Items factor analysed to identify the contribution activities make to perceptions of professional practice.	Three factors Competence, value and support.	Individual practitioners may not accurately assess their competence. Poor self-evaluation may lead to inadequate choice of CPD activity.

Cabana, Slish, Evans, Mellins, Brown, Lin, Kaciroti, Clark. 2006	USA. Primary care in 10 states. Paediatricians delivering asthma care Kirkpatrick level 4b	RCT (randomisation by site) one year after delivery of the programme. Physicians obtained 5 CME credits for attending the seminars, a certificate and £50 pa for participating. CMEs were aligned to those of professional societies to fit into post grad CME systems.	Changes in healthcare utilisation. ADL impacted 7 days less in the intervention group with the greatest improvement in those with high baseline symptoms. Similarly there was a sig reduction in ED visits again greatest in those with high baseline utilization.	Basic conditions for delivery: trained faculty with access to curriculum, a meeting venue and CME accreditation. However there were difficulties finding trainers with clinical and education expertise. Only 101/1400 physicians who were invited took part despite CME credits. The authors suggest these are the 'early adopters' who may influence change.
Cleland, Fritz, Brennan, Magel. 2009	USA. Ambulatory care clinics. Physical Therapists. Kirkpatrick level 4b	RCT: 4 to 7 weeks following a 2 day course on neck pain participants were randomised to attend two small group sessions, or no further education. The intervention arm was further randomised to receive an outreach visit in their own clinic.	Patients of those receiving ongoing training had reduced disability, and needed fewer home visits. Pain did not differ between intervention and control groups.	Advocate follow up post training to reinforce initial training,
de Lourenzi Bonillha, Goncalves, Morretto, Lipinski, Schmalfuss, Teles. 2012	Brazil Pre-natalist doctors and nurses in a basic health unit Kirkpatrick level 4b	A pre-post experimental approach. Frequencies of pregnancy exams were observed, as well as pre-natal and puerperal consultation.	Significant rise in exams (HBsAG, IgMToxo and VDRL in ascending order). The authors also believe that the pre-natalists became more sensitive to the detection of maternal diabetes during pregnancy.	Active participation allowed reflection on current issues experienced at first hand. Creating a non-threatening environment in the group was essential for developing communication skills and reflecting honestly about practice. Learners chose the topics in their own practice that they wanted to discuss and reflect upon and to develop proposals for new consultation actions

Forsetlund, Bjørndal, Rashidian, Jamtvedt, O'Brien, Wolf, Davis, Odgaard-Jensen. And Oxman. 2012	International with 18 UK studies, 3 published after 2004 Health Professionals. Kirkpatrick level 4b	Systematic review; 49 studies met inclusion criteria.	Overall effect size (ES) for all included studies is small but variable between studies. ES lower for complex behaviour and less serious outcomes	Predictors were higher attendance, mixture of interactive and didactic teaching rather than either alone,
Gagliardi, Wright, Anderson, Davis 2007	Canada General surgeons in six community hospitals who meet to discuss cases. Kirkpatrick level 2 (unclear if this leads to behaviour change or whether people are just seeking confirmation of their management strategy)	Qualitative study of how colleagues/peers address information needs through collegial interaction.	Cases presented at peer review sessions gave rise to questions. Meetings were a preferred option for keeping current with the literature, finding out what services were available, and gaining support for decisions. Guidance sought on cases where guidelines were not clear, or there was a need for judgement or there were comparable treatment plans. Primary outcome is that questions were answered.	Capacity to self-reflect is limited. Comparing their initial solutions with group decisions provides an opportunity for self-assessment. Vicarious access to a variety of cases. Participants claim improved patient satisfaction with decision making, more appropriate care, and better continuity. Is group consensus always correct? Decision making should be supplemented with evidence from experts or the literature (this can reduce adverse events, tests and procedures)
Gould, Drey Berridge 2006	UK Nurses Kirkpatrick level 1	Open questions on a survey were qualitatively analysed. 127 open responses completed	Five themes: • What CPD is for • Accessing CPD • One approach did not suit all staff • Managing CPD with other demands on time	• Required for career development • Update knowledge and safe practice • Motivates • Access inequitable especially for part time, night staff and older staff • Ward managers often miss out due to pressures of their job • Class vs work-based learning • Content not related to practice

			• Making the best of CPD – managers facilitate learning transfer	• Needs of junior vs senior staff • Managing demands of CPD alongside domestic and work commitments • Role of manager in implementation of learning
Goulet, Gagnon, Gingras 2007	Canada Physicians undergoing remedial professional development programme Kirkpatrick level 3	Before and after remediation study of routinely observed key performance indicators	Proportion of physicians with improved ratings for : Record keeping (20% to 54%) Clinical investigations (13% to 59%) Diagnostic accuracy (32% to 61%) Treatment and follow up (31% to 67%)	Learning objectives set by Practice Enhancement division based on performance indicators. Thus not self-directed. Seven physicians were struck off, retired or discontinued practice.
Goulet, Hudon, Gagnon, Gauvin. Lemire, Arsenault 2013	Canada Family Medicine Kirkpatrick level 2	Comparison of clinical performance indicators for family physicians assigned to three groups according to the amount and quality of CPD.	Association between poor performance and assignment to group with least CPD	Other indicators were older age and working in private practice.
Horsley, Hyde, Santesso, Parkes, Milne and Stewart. 2011	International Health Professionals. Kirkpatrick level 2	Systematic review; only 3 studies met inclusion criteria.	No effect on process of care or patient outcomes. Evaluation is mainly about critical appraisal knowledge	Questions class based CPD. Critical appraisal skills could be learned on rounds or within patient care settings.

Laprise, Thivierge, Gosselin, Bujas-Bobanovic, Vandal, Paquette, Luneau, Julien, Goulet, Desaulniers and Maltais	Canada GPs and nurses in primary care in Quebec Kirkpatrick level 4b	Clustered RCT comparison on CME or CME + SUPPORT	The supported group identified and undertook preventative care for 78% more undermanaged patients (KP 4) than the group given CME alone.	CME only was compared with CME with support from practice enablers and reinforces (nurses trained to implement chart review)
Leonard, Cimino, Shaha, McDougal, Pilliod, Brodsky. 2006	USA Paediatric Tertiary Care hospital, all clinical staff Kirkpatrick level 4b	A multifaceted intervention to reduce prescribing, This included a new e-prescribing system and a web based educational site and competency check. Evaluated using an interrupted time series	Reduction in prescribing errors Relative Risk 49%. Improved documentation.	Some stepwise analysis suggested that it was mainly the 'zero tolerance' policy to incomplete drug orders (e.g. ones which omitted patient weight and indication etc.) that made the most difference
Mansouri and Lockyer 2007	International (authors Canadian), all settings, mainly Physicians Kirkpatrick levels 2, 3 and 4b	Meta-analysis of 31 studies which included 61 types of intervention.	Overall effect size (ES) .28 ES for knowledge .22 ES for performance .18 ES for patient outcomes .14 Active and mixed methods had a larger ES .33 Passive had a smaller ES .20 Single method ES .24 Smaller ES for physician performance and patient outcomes	Key moderator variables: Positive correlations between: ES and contact hours r .33 ES and multiple interventions over time. r .36 Single discipline r.3 Lower ES for multiple disciplines r .13 Negative correlations between: ES and group size. r -.13 ES and time to outcome assessment. r -.31 (.04 for knowledge, -.34 for performance and -.44 for patient outcomes)

Mathers , Mitchell, Hunn 2012	UK Doctors Kirkpatrick levels 1,2, 3 and 4b	Qualitative study of impact of CPD on doctors performance and patient or service outcomes	Some benefits anecdotal, some improvements confirmed by audit, some deal with rare events and so outcomes difficult to ascertain.	Themes: Impact and benefits of CPD Barriers to undertaking CPD Barriers to implementing CPD Facilitation of CPD Overcoming barriers Trust/Royal college perspectives Cultural differences between primary and secondary care
Todd Vaughan, Rogers and Freeman 2006	USA, all settings, physical therapists Kirkpatrick level 4b	Literature review	No relationship between CME and improved patient outcomes	Of all the US states that have introduced mandatory CME only one has reported a reduction in the number of disciplinary actions for substandard nursing care.
Trogden, Altaire, Egan, Lackland, Masters. 2011	USA. Primary care providers. Kirkpatrick level 4b	This controlled study analysed the cost effectiveness of a CME programme aimed at improving patient hypertension outcomes compared with usual care. The cost effectiveness of the training was calculated using a 2 year to 10 year time horizon	Systolic and Diastolic BP both lower post intervention and in comparison with controls. Number of provider visits and prescriptions were both higher post intervention compared with controls. Life years gained were .003 per patient with cost effectiveness ratio of patients per provider was between $39,000 and $54,000.	Aimed to: raise awareness, familiarise with Evidence bas guidelines, set up a community network, encourage providers to become specialists in hypertension.
Underwood, Dahlen-Hartfield and Mogle 2004	USA All settings Nurses Kirkpatrick level 1, 2 and 3	Prospective study of the impact of three educational interventions at three time points. Using an evaluation tool based on modified model of Cervero (1984).	Results showed significant improvement in expertise from time 1 to time 2. Low but significant relationships between variables.	High attrition at 6 month follow up did not allow a full test of the model.

Wenghofer, Marlow, Campbell, Carter, Kam, McCauley, Hill 2014	Canada Physicians Kirkpatrick level 3	Multivariate regression of CPD data linked with practice assessment data.	Physicians participating in CPD were significantly more likely to have satisfactory assessments (OR 2.5)	For three types of CPD (Group, self-directed, assessment based) only group based CPD was significantly associated with satisfactory assessment. Unsure of the causal direction. Do good practitioners do CPD or does CPD make good practitioners?
Wolters, Grol, Schermer, Akkermans, Hermens, Wensing. 2006	Holland. Primary care. GPs Kirkpatrick level 4b	Cluster randomised control trial to evaluate the impact of a GP distance learning package	No effect on patient symptoms, but significant reduction in costs of referral to specialist	GPs felt more confident about managing UTIs after the distance learning, felt more able to educate patients and thus felt the need to make specialist referrals less often, reducing costs.
Ziegelstein, Fiebach 2004	USA Acute care, residents Kirkpatrick level 1	Evaluation of tools used to reflect on own performance and in the context of the health care 'community'	Quality assessment, multidisciplinary rounds, mortality and morbidity morning reports, clinic chart self-audits all rated highly (>76%) as a means of improving proficiency. Nursing evaluations rated lower (52%)	Included because of the concept of the Mirror and the Village used in portfolio learning – the mirror being reflective, the village ('it takes a village to raise a child') to encourage learning about the interprofessional and systems based aspects of healthcare.

Appendix 5: Interviews with HCPC council members, assessors and registrants

Semi-structured interview guide

The plan was to select interviewees using maximum variation (covering a wide range of issues i.e. professional group, staff grade, NHS or private sector, age and gender). A pre-screening questionnaire containing the above information was completed prior to the interview.

Interview questions focus on participant experiences of the system, and identify strengths, potential weaknesses and risks in relation to continuing fitness to practise; the type and amount of CPD undertaken pre and post- introduction of HCPC CPD requirements, and time taken to complete the audit. Questions on added value such as changes in professional practice and patient benefit will also be explored

Interview guide for Council members

Introduction

- Ask if participant has any questions about the research (or information sheet)
- Give brief introduction to participant: This interview is to explore your experience of the current HCPC CPD system, its effectiveness, and any changes you might suggest.
- The interview will last around half an hour
- Confirm consent has been taken
- Ask for permission to record interview.

1. What is your experience of the CPD system?

   Prompts - role in development

2. How effective is the CPD system from your perspective?

   Prompts - being able to capture a registrant's evidence of practice, reflection,

   Prompts - strengths and weaknesses

3. How effective do you think the audit system is?

   Prompts - strengths and weaknesses

4. Could the system (CPD and audit) be changed in any way?
   Explore….

5. Are there any other points that you would like to make that you feel is relevant but that we have not covered in the questions?

One final question

6. Would you be willing to be contacted again by a researcher to ask further questions on some of your answers?

Thank you for your participation

Interview guide for Employers

Introduction

- Ask if participant has any questions about the research (or information sheet)
- Give brief introduction to participant: This interview is to explore your experience of the current HCPC CPD system, its effectiveness, and any changes you might suggest.
- The interview will last around half an hour
- Confirm consent has been taken
- Ask for permission to record interview.

1. What is your experience of the CPD system?

   Prompts - role in development

2. How effective is the CPD system from your perspective?

   Prompts - being able to capture a registrant's evidence of practice, reflection,

   Prompts - strengths and weaknesses

3. How effective do you think the audit system is?

   Prompts - strengths and weaknesses

4. Could the system (CPD and audit) be changed in any way?

   Explore….

5. Are there any other points that you would like to make that you feel is relevant but that we have not covered in the questions?

One final question

6. Would you be willing to be contacted again by a researcher to ask further questions on some of your answers?

Thank you for your participation

Interview guide for Assessors

Introduction

- Ask if participant has any questions about the research (or information sheet)
- Give brief introduction to participant: This interview is to explore your experience of the current HCPC CPD system, its effectiveness, and any changes you might suggest.
- The interview will last around half an hour
- Confirm consent has been taken
- Ask for permission to record interview.

1. What is your experience of the CPD system?

   Prompts - role in development

2. How effective is the CPD system from your perspective?

   Prompts - being able to capture a registrant's evidence of practice, reflection,

   Prompts - strengths and weaknesses

3. How effective do you think the audit system is?

   Prompts - strengths and weaknesses, worthwhile e.g. Time

4. Could the system (CPD and audit) be changed in any way?

   Explore….

5. Are there any other points that you would like to make that you feel is relevant but that we have not covered in the questions?

One final question

6. Would you be willing to be contacted again by a researcher to ask further questions on some of your answers?

Thank you for your participation

Interview guide for Registrants

Introduction

- Ask if participant has any questions about the research (or information sheet)
- Give brief introduction to participant: This interview is to explore your experience of the current HCPC CPD system, its effectiveness, and any changes you might suggest.
- The interview will last around half an hour
- Confirm consent has been taken
- Ask for permission to record interview.

Thinking about the CPD process

1. Do you feel that you have enough information about the process (e.g. HCPC standards to follow) of CPD and what is required to be able to complete your CPD?

   Prompts - where from? E.g. website, employer, colleagues etc.

   How did you identify what areas you needed to develop?

2. What type of CPD have you undertaken?

   Prompts – variability, collection of evidence, learning approach taken

3. Did you feel that by doing the CPD it helped with your professional practice?

   Prompts - explore …in what way?

   Prompts - How has CPD helped with developing soft skills (communication)?

   E.g. team working, patient interactions

4. What impact does the current CPD system have on professional practice?

5. What impact does the current CPD system have on patient safety?

6. How much CPD have you undertaken?

   Prompts - was this enough?

7. What do you think the strengths are of the current CPD system (if any)?

8. What do you think are the weaknesses of the current system (if any)?

9. What changes, if any, would you recommend?

If support and time haven't come out of answers ask if they feel that this is adequate

10. How much CPD did you undertake before and after the introduction of the HCPC CPD requirements?

Moving on to questions about the Audit process (if been audited)

11. How long did it take to complete the audit (on average)?

12. Were you supported by your employer or organisation during this time?

13. Did you feel that you got enough feedback from the assessors?
    Prompts – explore…

14. What are the strengths of the system?

15. What are the weaknesses of the system?

16. What changes, if any, would you recommend?

17. Are there any other points that you would like to make that you feel is relevant but that we have not covered in the questions?

One final question

18. Would you be willing to be contacted again by a researcher to ask further questions on some of your answers?

Thank you for your participation

Appendix 6: Salaries and 'Full Staff Costs'

Respondents were asked to report their NHS Band and for that band, they were given the NHS salary bracket. To provide an estimate of the respondents' salary, they were assigned the mid-point of their respective salary bracket.

Full staff costs are conventionally used in economic analysis to indicate costs to the healthcare provider. Costs are taken from the perspective of the NHS and, for this reason, full staff costs are estimated following methods outlined by unit costing methods provided by Personal Social Services Research Unit[9]. Full Staff Cost is therefore the sum of Salary, staff on-costs (e.g. national insurance, superannuation), overhead costs (e.g. management, administrative and estates) and non-staff costs (e.g. for 'office, travel/transport and telephone, education and training, supplies and services (clinical and general), as well as utilities such as water, gas and electricity').

Table 37 summarises registrants' *Salaries* and associated *Full Staff Costs* across the sixteen professions registered with HCPC, namely: *Arts therapists, Biomedical scientist, Chiropodists / podiatrists, Clinical scientists, Dieticians, Hearing aid dispensers, Occupational therapists, Operating department practitioners, Orthoptists, Paramedics, Physiotherapists, Prosthetists / orthotists, Practitioner psychologists, Radiographers, Social workers, and Speech and language therapist.*

[9] http://www.pssru.ac.uk/project-pages/unit-costs/2015/

Table 37: Salary and associated Full Staff Costs* estimated taking the mid-point salary for reported NHS Band.

	Salary Midpoint for NHS Band (£)				Full Staff Costs (£)*				
Profession	mean	median	min	max	mean	median	min	max	n
Arts therapists	35,816	32,221	10,311	63,412	62,778	56,477	18,073	111,148	47
Biomedical scientist	47,249	43,479	14,238	74,698	82,817	76,210	24,957	130,932	58
Chiropodists / podiatrists	40,435	35,782	16,102	89,450	70,874	62,719	28,223	156,789	36
Clinical scientists	64,450	63,412	10,311	106,731	112,968	111,148	18,073	187,078	52
Dieticians	46,300	46,687	0	89,450	81,155	81,832	0	156,789	73
Hearing aid dispensers	49,904	43,479	18,841	106,731	87,471	76,210	33,024	187,078	48
Occupational therapists	41,386	43,479	9,022	77,850	72,542	76,210	15,814	136,455	77
Operating department practitioners	40,010	35,782	22,364	89,450	70,129	62,719	39,199	156,789	69
Orthoptists	39,449	39,632	0	89,450	69,146	69,467	0	156,789	102
Paramedics	38,790	35,782	14,313	63,412	67,991	62,719	25,087	111,148	57
Physiotherapists	40,778	39,632	7,609	89,450	71,476	69,467	13,337	156,789	110
Prosthetists / orthotists	54,825	51,554	22,364	106,731	96,097	90,364	39,199	187,078	50
Practitioner psychologists	63,311	63,412	14,238	106,731	110,972	111,148	24,957	187,078	38
Radiographers	45,752	43,479	22,364	89,450	80,194	76,210	39,199	156,789	77
Social workers	48,231	51,554	14,238	106,731	84,539	90,364	24,957	187,078	214
Speech and language therapist	43,088	43,479	23,844	74,698	75,525	76,210	41,793	130,932	37

* Full staff cost is estimated from the sum of salary and non-salary costs (calculated as a relative to indicated salary): 1. On-costs of superannuation (14%); 2. Management, administrative and estates staff (19.31%), and; 3. non-staff cost (41.97%)

Based on individuals full staff costs, hourly rate were estimated according to reported information on employment status (i.e. full-or part-time) and the number of hours per working week. To estimate the cost of completing individual CPD activities, individuals' unit staff cost (per hour) were multiplied to their reported time spent on each individual activity.