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Rapid review on the effectiveness of continuing professional development in the health sector

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Summary

The evidence base about the effectiveness of continuing professional development (CPD) is mixed, particularly in terms of material on cost effectiveness and the impact of CPD in terms of long term changes in practice. Most research about CPD has been undertaken with doctors and nurses, with less material on allied health professionals' experience of CPD. Overall, the findings suggest that:

- A baseline study of CPD for nurses and allied health professionals would be timely
- It is important to identify how NHS professionals spend their new CPD funding, particularly in terms of what sort of training they find most useful for their current practice
- There is an opportunity to consult with arms length bodies, professional organisations, practitioners, patients and carers about the impact of specialist versus generalist CPD and interprofessional CPD on overall skill mix within the NHS workforce
- A whole systems approach to CPD would be valuable as this would help define the impact of investment in CPD on productivity, workforce satisfaction and patient outcomes.

Background

The government has announced an additional £210 million for the NHS as part of the latest spending round. This includes a £1,000 personal development budget for every nurse, midwife and allied health professional to support their personal learning and development needs over three years and additional funding for wider education and training budgets to support the implementation of the NHS Long Term Plan (GOV.UK 2019). Such investment is taking place in the context of the NHS Interim People Plan with its ambitions to make the NHS the best place to work in the world.

This forms the background for a responsive request from the Department of Health and Social Care to the NIHR Policy Research Unit on Health and Social Care Workforce to undertake a rapid review exploring the effectiveness of continuing professional development (CPD) in the health sector. The aim was to explore:

- What does good/effective CPD involve?
- Is there any evidence that CPD investment leads to improved productivity (including savings through more efficient skills mix?)

A series of searches of databases, websites, journal tables of contents, and internet searches was undertaken to identify material included in this report. However, the rapid turnaround time means that this is only a very partial picture and further work would be required to assemble more detailed evidence to help inform policy options. Such work would also helpfully include wider debates about UK training and productivity (for example, CIPD 2019).

Defining CPD

There are many definitions and descriptions of continuing professional development (CPD) and it is often used synonymously with other terms such as continuing professional education, lifelong learning and staff development (Gallagher 2007). CPD can be mandatory either for revalidation with a regulatory body or to comply with an employer's requirement. It can also be voluntary and undertaken to enhance promotion prospects (Schostak et al. 2010a) or for personal development (Burrow et al. 2016, Pool et al. 2016). Some CPD is accredited, meaning that the learning activity has reached the required Continuing Professional Development standards and benchmarks (CPD Certification Service 2019). Other CPD is unaccredited, meaning that practitioners seeking to change employer may find that their previous learning is not recognised should they switch jobs.

A common theme across definitions of CPD is an emphasis on safety, effectiveness and the ability to provide care that is in line with current evidence:

[CPD is] a planned process of education and development [that] will increase professional performance, which in turn will benefit individuals, organisations and the wider community. The accepted outcome of CPD for healthcare professionals is to enhance the outcome of patient care by improving practice through activities such as reflection, evaluation and consideration of the evidence base. Thus, as a result of CPD, patients should expect to receive diagnosis and treatment which is effective and based on sound up to date evidence.

(Gibbs 2011: 153)

Continuing professional development is the process by which health professionals engage in activities to maintain and extend their knowledge, skills and performance, as well as develop the personal and professional qualities required to provide safe and effective services to improve the health of the community.

(Allen et al. 2019)

However, other definitions, such as that adopted in an European Union (EU) wide study of doctors, nurses, dentists, midwives and pharmacists, are more expansive. These include patient relationship skills, regulatory and ethical developments as well as research and interprofessional collaborations:

[CPD is the] systematic maintenance, improvement and continuous acquisition and/or reinforcement of the life-long knowledge, skills and competences of health professionals. It is pivotal to meeting patient, health service delivery and individual professional learning needs. The term

acknowledges not only the wide ranging competences needed to practice high quality care delivery but also the multi-disciplinary context of patient care.

(Executive Agency for Health Consumers 2013: 6)

When adopting such a broad definition, the overall goal of CPD activities is not only to convey information but to encourage critical thinking and reasoning in order to promote behaviour change related to better outcomes for patients.

Motivations and access

One of the key principles of CPD is that the individual professional must take some responsibility for planning and undertaking their own CPD, ensuring that it is relevant to their current practice and future career development (Gibbs 2011). Several empirical studies (Calder 2019, Erol, Upton and Upton 2016, Manley *et al.* 2018, Pool, et al. 2016, Snelson and Hoskin 2018) and reviews (Burrow, *et al.* 2016) have explored practitioners' motivations for undertaking CPD. A consistent message across these studies is that the key motivators for undertaking CPD for practitioners are:

- increasing competence
- complying with requirements
- deepening knowledge, and
- enhancing career development.

However, motivating factors may vary within professions, with one study reporting that the networking opportunities of CPD were more important to GPs than to pharmacists (Cunningham *et al.* 2019).

Funding and availability are major barriers in access to CPD. Exceptionally, some practitioners pay for and undertake CPD without the knowledge of their employer but supportive workplace culture and management are important facilitators in encouraging practitioners to undertake CPD (Burrow, *et al.* 2016, Manley, *et al.* 2018). By contrast, some employers take the view that CPD is a 'luxury' which cannot be afforded when funding is in short supply, especially when CPD has to be undertaken during working hours and 'backfill' is needed to cover those members of staff on training (Gibbs 2011). Lack of access to CPD has been cited as a barrier to recruitment and retention in a Royal College of Nursing (RCN) report (2018). This same report also highlighted that 15% of RCN members had not undertaken their mandatory training in England in 2017. The figures were higher in Scotland (28%), Wales (35%) and Northern Ireland (25%) (Royal College of Nursing 2018).

It is also worth highlighting variations in access to, and uptake of, CPD across different parts of the health sector. For example, all participants in a study of paediatric primary care were undertaking a mandatory accredited CPD programme to become an advanced nurse practitioner or physician associate (Snelson and Hoskin 2018). By contrast, outside of specific clinical roles, workers in addiction treatment services have more variable professional and educational backgrounds. In this setting, addiction treatment training can be less systematic, unregulated and variable. This may be a barrier to the diffusion of evidence based practice (Calder 2019).

What does good CPD involve?

There is a plethora of different CPD delivery formats ranging from postgraduate courses provided in higher education institutions to online programmes (Allen, *et al.* 2019, Calder 2019, Cunningham, *et al.* 2019) or even serious games (Wang *et al.* 2016) that practitioners can complete at home and in their own time. Snelson and Hoskin (2018) summarise the advantages and disadvantages of the main formats through which CPD takes place (see Table 1).

Table 1: Strengths and weakness of different educational models for delivering CPD

Educational model	Strengths	Weaknesses
Large group (50+) single educational events	<p>Reaches a large audience</p> <p>Minimal investment required of learners</p> <p>More likely to reach those who do not recognise their own learning need</p> <p>Allows consistency of learning across a group of clinicians (e.g. CCG-wide events)</p> <p>Very efficient use of educator time and available funding</p>	<p>Likely to be more didactic and less interactive</p> <p>Difficult to meet individual learning needs across a range of disciplines and levels of experience</p> <p>Larger venue needed</p> <p>Moderate effort required for planning and delivery</p> <p>Potential for significant disruption to be caused to a large number of people (e.g. speaker unwell on the day)</p>
Small group (10–40) single educational events	<p>Able to tailor learning to the needs of the group</p> <p>Capable of providing more in-depth learning</p> <p>Audience likely to engage well</p>	<p>Fewer clinicians benefit from the learning</p> <p>May suffer from the inverse educational trap – those that need the learning the most do not attend</p>
Face-to-face delivery of a full course (5–10 days)	<p>Ability to accredit learning if desired</p> <p>More ability to ensure that all learning needs are met (known and unknown)</p>	<p>The most labour-intensive model to design and deliver</p> <p>Requires the learners to commit to several days</p>

Educational model	Strengths	Weaknesses
	<p>Ability to provide classroom learning which is interactive and in-depth</p> <p>Initial investment in materials pays dividends and workload decreases with time</p>	<p>Presumptions about curriculum may not match the needs of the learners</p> <p>Cost</p>
<p>Bespoke course (small group classroom learning)</p>	<p>Allows a locality to decide the specific needs of a group of clinicians (e.g. for service development)</p> <p>Content is determined by the perceived learning need</p> <p>Ability to provide classroom learning which is interactive and in-depth</p>	<p>May be labour intensive</p> <p>Unless repeated on a rolling programme, investment in preparation does not become less with time</p>
<p>Distance learning course</p>	<p>Ability to reach a large audience</p> <p>Ability to remove geographical barriers</p> <p>Some ability to deepen learning beyond the core materials</p> <p>Can be blended with classroom learning</p>	<p>Much reduced ability to interact meaningfully with the learner</p> <p>Learning is more about content delivery than the specific learning needs of the individual</p> <p>The educator is unlikely to recognise when a learner is struggling</p>
<p>Open access Online (FOAMed)</p>	<p>Unlimited in numbers that can access the learning</p> <p>Not time limited</p> <p>Ability to vary media – articles, podcasts, infographics</p>	<p>Limited interaction with the learner</p> <p>Difficult to assess the impact and educational value</p>

(Snelson and Hoskin 2018: 371; CCG is Clinical Commissioning Group)

The World Health Organization (WHO) has called for more research on the ‘...comparative advantages of different modalities of financing and scaling up of the education and training of health professionals’ (WHO, 2013, p. 52). Despite this, studies

invariably report the overall benefits of CPD for individuals and their employing organisations (Allen, *et al.* 2019, Barnes *et al.* 2013, Burrow, *et al.* 2016, Calder 2019, Clark, Draper and Rogers 2015, Erol, Upton and Upton 2016, Légaré *et al.* 2015, Manley, *et al.* 2018, Muijs and Lindsay 2008, Murgatroyd 2011, Phillips *et al.* 2019, Pool *et al.* 2015, Schostak, *et al.* 2010a, Snelson and Hoskin 2018, Wakeling *et al.* 2019, Walker *et al.* 2019, Wang, *et al.* 2016), although many acknowledge that it is harder to demonstrate direct benefits for patients and carers or to demonstrate changes to recruitment and retention patterns.

With reference to clinicians, Phillip *et al.* (2019) report that interactive CPD sessions that promote participation and the opportunity to practise skills have the best chance of generating positive changes in clinicians' performance. Audit and feedback and educational outreach visiting ('academic detailing') have both been demonstrated to modestly shift practitioners' beliefs and behaviours. However, these CPD approaches are labour and time intensive to implement, especially compared to online learning management systems, which are accessible, scalable, flexible, supportive of interprofessional learning and affordable. A systematic review and meta-analysis concluded that it was likely that online methods may be as effective as alternative methods for training healthcare practitioners in clinical interventions for the outcomes of knowledge and clinical behaviour (Richmond *et al.* 2017). However, researchers have emphasised the low quality of the evidence on the published work on online CPD, which precludes firm conclusions on the relative effectiveness of these training methods (Calder 2019, Curran *et al.* 2019, Richmond, *et al.* 2017). Other research with newly qualified nurses highlighted the benefits of combining online learning with face to face contact with a mentor (Erol, Upton and Upton 2016), so it is likely that good CPD will continue to involve multiple modes of delivery.

Measuring the effectiveness of CPD

While the effectiveness of CPD has been the subject of much enquiry, very little has explored the impact of CPD on practice so there is little evidence to demonstrate that investment in CPD has a tangible impact on practice and patient care (Allen, *et al.* 2019, Manley, *et al.* 2018; WHO 2013). In particular, there appears to be very limited recent evidence on the cost-effectiveness of CPD (Belfield *et al.* 2001), beyond discussion of the costs to practitioners (Barnes, *et al.* 2013) or the potential to look at costs and productivity (Coulson-Thomas 2010).

For this reason, most of the existing ways of assessing the effectiveness of CPD have been through analysis of theoretical, rather than empirical models. These have included Schon's model of the reflective practitioner (Kemp and Baker 2013, Schostak *et al.* 2010b) and Bloom's taxonomy of the cognitive, psychomotor and affective domains (Hayes 2016, Légaré, *et al.* 2015). Manley *et al.* (2018) used Pawson and Tilly's context, mechanism and outcome (CMO) framework in which the workplace provided the context, the mechanism was facilitated support and reflection, self-driven learning and assessment, and the outcome was changes for the individual (for example, Increased self-confidence, and perceived self-efficacy) and organisation (for example, a knowledge-rich culture).

One of the most popular ways of assessing the effectiveness of CPD, particularly in medical education, has been Kirkpatrick's training model. This is a conceptual framework, which

has undergone several adaptations since its original publication (Phillips, *et al.* 2019, Reeves *et al.* 2016, Schostak, *et al.* 2010a, Schostak, *et al.* 2010b, Shen *et al.* 2017, Walker, *et al.* 2019). In Table 2, Kirkpatrick's model is shown in four levels.

Table 2: Applying Kirkpatrick's Training Model to the Evaluation of CPD Activities

Level	Component of change	Description
Level One	Reaction	Evaluates participants' satisfaction with a CPD activity. This level generally provides data relating to participants' perception/satisfaction with the programme, delivery, instructors, and environment.
Level Two	Learning	Evaluates participants' changes in knowledge, skills, or attitudes. Usually assessed with pre- and post-test studies to detect what participants have learned after a CPD activity.
Level Three	Behaviour change	Evaluates the extent to which learning has influenced the post learning behaviour or the performance of a healthcare professional in her or his practice.
Level Four	Patient/health outcomes	Evaluates the tangible results (such as improvement in patient health) of the influence of CPD activities in healthcare professionals' behaviour.

(Légaré, *et al.* 2015: 198)

Most research suggests that CPD rarely achieves behaviour change or impacts on outcomes. One reason for this is that most objectives focus on transmission rather than the application of knowledge (Légaré, *et al.* 2015) and that few studies have been able to collect data over the long-term.

While recognising the limitations of a failure to focus on the outcomes of CPD, some commentators have suggested that the current emphasis on evaluating *outcomes* has overlooked the importance of those underlying *processes* that are essential to the identification of what outcomes can be achieved. In this context, an understanding of the processes that facilitate effective CPD is a crucial first step before it is possible to evaluate outcomes meaningfully (Clark, Draper and Rogers 2015, Wallace and May 2016).

Discussion

This rapid review has highlighted the diversity in the types of CPD that are available and what appears to be variation in access to, preferences for, and the type of CPD available to different healthcare professionals. Although the items retrieved for the review included items about allied health professionals (Erol, Upton and Upton 2016, Gibbs 2011, Hunter and Nicol 2002), clinicians (Allen, *et al.* 2019, Murgatroyd 2011, Saidi and Weindling 2003, Schostak, *et al.* 2010a, Snelson and Hoskin 2018, Wakeling, *et al.* 2019), dentists (Barnes, *et al.* 2013), nurses (Clark, Draper and Rogers 2015, Cunningham, *et al.* 2019,

Erol, Upton and Upton 2016, Glasper 2018, Hayes 2016, Kemp and Baker 2013, Pool, *et al.* 2015, Pool, *et al.* 2016, Snelson and Hoskin 2018), midwives (Erol, Upton and Upton 2016), pharmacists and pharmacy technicians (Snelson and Hoskin 2018, Wakeling, *et al.* 2019), there was not enough time to compare results across professions where appropriate. Had there been more time, it would also have been possible to explore differences in the evidence base. For example, there appeared to be very limited recent published empirical research about occupational therapists beyond a review published nearly 20 years ago (Hunter and Nicol 2002). Further work would be needed to explore this apparent difference more rigorously and to consider the whole system impact of CPD.

Increasing interest in the cost-effectiveness of CPD has led to greater focus on the mandatory CPD that health professionals need to undertake in order to remain on the professional register. One explanation of this may be the context of budget reductions leaving mandatory CPD as the prominent mode. However, this review has highlighted areas of the health sector which remain comparatively under researched in terms of establishing the skills base and knowledge of practitioners (Calder 2019) and the accessibility and effectiveness of CPD. Greater information about comparative productivity in NHS hospitals may make it easier to link productivity to training.

While professional bodies and regulators can gather information about mandatory CPD comparatively quickly, this information will, of necessity, be mainly descriptive. Large scale published empirical studies of CPD (Schostak, *et al.* 2010a) or systematic reviews (Allen, *et al.* 2019, Phillips, *et al.* 2019) appear to be confined to medicine. A baseline study of CPD of other professions would appear to be timely in the light of the considerable new investment in the CPD of nurses, midwives and allied health professionals working in the NHS (Clover 2019). Policy options include commissioning more research on the cost-effectiveness of multi-professional CPD or teamwork in integration contexts. New developments internationally, such as New Zealand's launch of competitive application processes for non-mandatory CPD (see Heap 2018 on the Contestable Professional Development Fund), may be worth exploring now that this initiative has moved beyond start-up stages.

Policy options also include taking the opportunity to establish what healthcare professionals would see as their priority given the apparent aspiration for the new investment in CPD to have some personal flexibility. Referred to as both 'personal training budgets' and 'personal training budgets' (see *Health Services Journal* reports of the policy announcement, Clover 2019) the examples of how such money can be used include personal learning and development needs, the development of clinical skills, and obtaining advanced practice qualifications. Analysis of data on the usage of such new funding would add new information about what might happen if staff have greater choice and control over their own CPD (in addition to that which they are expected to self-fund). There is also a possible opportunity to consider CPD in relation to generalist healthcare and specialism, in light of greater multi-morbidity which is increasing calls for the reinvention of the 'generalist' in healthcare services. CPD is sometimes undertaken to enhance specialist skills in the literature; employers and Arm's Length Bodies may wish to see if this fits their priorities. There appears to be little evidence on CPD impact on skills mix making this a possible priority for attention.

The policy statements about the new funding mention that this new CPD funding could assist nurses (cited specifically) to ‘move more easily between different roles in different parts of the NHS – for example, moving from hospital to community care – to deliver the ambitions set out in the long-term plan’ (GOV.UK 2019). Such outcomes are not generally reported in the CPD evidence and this would suggest policy options to investigate if and how such funds facilitate moves from acute to primary or community care.

The funding announcement also mentioned that government, employers and trade unions would be able to ‘*take into account local circumstances, priorities and skills shortages*’ in funding decisions (GOV.UK 2019). This potential for local variation presents a complexity that is not generally reported in the research but also may help meet the aspiration for the NHS to concentrate effort where it is most needed and to use available resources.

The new funding for CPD was linked with the imperative to increase retention and morale. The Treasury announcement (GOV. UK 2019) stated ‘*Access to additional training is regularly cited as an issue affecting morale and retention for non-medical staff, especially nurses. This funding will help them to develop rewarding, lifelong careers in the health service*’. Policy options could include linkage of evidence about morale with retention data and CPD. There is also the potential for policy makers to consider the role of CPD among the sizeable proportion of NHS staff who are already nearing the end of their lifelong or other careers in the NHS. Pool *et al.* (2015) found variations in motivation for undertaking CPD depending on age: ‘gaining experience and building a career’ held particularly true among younger nurses, ‘work-life balance’ and ‘keeping work interesting and varied’ to middle-aged nurses, and ‘consistency at work’ to older nurses. These insights could help the NHS meet the needs of its staff in all age groups.

Finally, considering new routes to health qualifications through apprenticeships and associate roles, for example, policy makers may wish to see if the existing evidence base on traditional CPD is congruent with the experiences of those who have obtained their qualifications after other employment or training experiences. This suggests a more whole systems approach to CPD in defining what good or effective CPD involves and seeking evidence about the impact of CPD investment on productivity, workforce satisfaction, and patient outcomes.

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