# The Future of Continuing Professional Development

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Continuing professional development (CPD) is any "learning outside of undergraduate education or postgraduate training that helps maintain and improve performance. It covers the development of knowledge, skills, attitudes and behaviours across all areas of professional practice. It includes both formal and informal learning activities."[1] Therefore, CPD should incorporate all aspects of a doctor's learning and behaviour, including clinical and non-clinical aspects. By contrast continuing medical education (CME) is limited to clinical learning: CME is thus a subset of CPD.

Doctors sometimes talk about CPD as if it is something new, but in fact it has been around for a considerable length of time. For example, in 1894, John Shaw Billings wrote that "the education of the doctor which goes on after he has his degree is, after all, the most important part of his education."[2] CPD has evolved since the 1800s and like all facets of healthcare, it needs to be continually renewed and made fit for purpose for our rapidly evolving future. This editorial looks to the future of CPD and examines themes that are likely to dominate the field over the coming years. It looks specifically at the role of new technologies, the linking of CPD and quality improvement, point-of-care CPD, and the importance of low cost formats.

## The role of new technologies

New technologies that enable the delivery of novel forms of CPD will become even more important in the future. E-learning did not exist twenty-five years ago and today it accounts for a substantial and growing proportion of all the CPD that is done. This will continue and will evolve as technology evolves. Mobile learning devices (via tablets and smartphones) will become even more important in the future.[3] Mobile learning has many attractions - not least the fact that doctors can then do CPD at a time and a place that suits them. The advent of offline apps will eventually make an internet connection unnecessary.

At present e-learning enables an increasingly interactive and multimedia experience – but new technologies will revolutionise what we think of as interactivity. Virtual reality is changing how we play games and watch videos, and it will also change how we engage with online education.[4] There are now many more simulation centres in teaching and healthcare institutions than there have been in the past, but usage of these centres is still limited by time and place. In the future, virtual reality will enable learners to experience high fidelity, simulation-based online programmes – but from the convenience of their workplace or home.

## The linking of CPD and quality improvement

In the past medical education has sometimes been divorced from the real world of healthcare. However, in the future, CPD will be much more closely linked to quality improvement.

CPD material will mention and ideally link to tools that enable the doctor to improve their practice. These quality improvement tools typically involve measuring quality at baseline, using methodologies from improvement science to drive improvement, and continuous re-measurement. Ideally, quality improvement will be team-based and systematic – and CPD should facilitate this.

Where practice change and improvement are difficult, the educational provider will highlight barriers to change and also factors that are outside of the learner's control when they are attempting to change practice. These barriers might be individual, team-based or institutional. The provider should enable users to capture any changes in practice that have occurred because of their learning.[5] And as part of this movement, CPD will change from being an individual activity to a team-based one. Quality improvement cannot be achieved by one person acting alone

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and so CPD will need to evolve to enable this to happen.

### Point-of-care CPD

Closely linked to the idea of CPD as a means of quality improvement is the concept of point-of-care CPD that is based on the real-world of clinical practice. As medical knowledge continues to grow, it will become even more difficult for doctors to keep their knowledge updated – and so they will need clinical decision support resources that will help them at the point-of-care. Doctors will use these resources when they have a learning need and will put their learning into action immediately for the benefit of their patients. All of this encapsulates good practice in learning and CPD. In the future, the use of clinical decision support resources will count more for CPD and especially so if the point-of-care learning is linked to real world data through patients' electronic health records. In the years to come, point-of-care clinical decision support tools will be accessible through patients' electronic health records.

### The importance of low cost formats

Lastly and in keeping with all activities in healthcare, individuals and institutions will look closely at the cost of CPD and will develop methods and use resources that are low cost and high value. This will mean change in a variety of areas. It will likely mean more e-learning and more sharing of educational resources between professions, teams and institutions. It will also mean scale up of provision to generate efficiencies. In the case of e-learning, this will result in more resources that will be accessed by a wide range of different types of healthcare professionals. It will also result in low cost simulation and virtual reality.[6]

Ultimately CPD will be about integration of new trends to create a greater whole - for example virtual reality simulation programmes built on real world data or low cost e-learning that is linked to algorithms driving quality improvement. It is impossible to describe all the potential changes that might happen in the domain of CPD. These are just a few and no doubt there will be more.

As a CPD provider, BMJ is keen to keep up with these trends and put these principles into practice to improve our own CPD resources. These include BMJ Learning (our online learning resource), BMJ Best Practice (our clinical decision support tool), and BMJ Open Quality (our journal that publishes practical quality improvement reports).

Individual countries, including Iraq, will need to examine these trends as well and decide how they should be implemented at a national level. Ultimately, the implementation of CPD resources should be based on the needs of healthcare professionals and the patients that they serve.

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**Conflict of interest**: Kieran Walsh and Lalitha Bhagavatheeswaran work for BMJ which produces a range of different types of CPD resources. .

**Funding:** The authors report no external funding source for this paper.