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## Measuring Outcomes of Continuing Professional Education

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# Measuring Outcomes of Continuing Professional Education

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**Abstract:** *Continuing professional education (CPE) should improve performance, yet ways of establishing evidence of improvement are hard to identify. We propose a systematic review of the outcomes of various CPE strategies. To do this we need to establish how the effectiveness of CPE can be measured and explore this in the health-care professions.*

## Introduction

Participants in the roundtable will be expected to have some experience in designing and delivering CPE. The session will explore the following questions:

- In CPE does assessment have a role?
- In what circumstances is assessment neither appropriate nor relevant?
- What assessment measures are not appropriate?
- How can the assessment of CPE be improved?

Assessment of learning, and measurement of desired outcomes, is important. We want to inquire into the evidence for the efficacy of certain sorts of learning interventions. That is, what research basis exists for certain sorts of intervention rather than others? How can educators or providers of education know they have provided an "adequate dose" of education / learning opportunity? Since there is a substantial literature about CPE for health care professionals we chose this to explore CPE activities.

## What Sorts of Outcomes is CPE Meant to Generate?

When pilots emerge from flight simulators, having "crashed" their "plane," more often than not, they return to their real cockpit the following day and continue moving passengers and freight around the world safely and efficiently. Clearly "crash" outcomes in a CPE exercise do not curtail pilots' professional activities. In the health professions (and also in the legal professions), CPE is often designed to approximate real work conditions through simulations, case studies, "critical incident"/problem-

based scenarios and the like. These CPE methods represent practical knowledge in active ways. But then paper-based assessment (tests, examinations) are also designed to reveal (i.e. measure) what a medico, nurse or lawyer has learned. Increasingly, registration ("licensing") is a mandatory feature of professional life. Competence structures are also intended to advance the assessment of professionals' learning, and there is a complex and extensive literature on the 1990s incarnation of these.

The difficulty is that not everything can be measured. Furthermore, what can be measured is often difficult to measure – attitudes, for example, present very complex problems to the assessor. So, like the pilots, evidence of learning must be selective. Moreover, the generation of knowledge (information?) itself is expanding exponentially, and the range and diversity of professionals' expertise is increasingly challenged by rising expectations within the community. Clearly there are substantial grounds for locating CPE in terms of "learning about learning," which some call meta-cognition, others call "double loop learning," and yet others refer to as "reflective practice". One aspect of successful learning is identifying a learning need – to proud professionals this may amount to admitting ignorance or lack of competence.

We are interested in exploring the extent to which CPE can be specified in these ways because these concepts raise problems of measurement of outcomes. If certain sorts of learning intervention are available, targeting a professional's ability to "learn how to learn," it is important that the most

appropriate intervention is actually used to produce the desired outcome. Why use flight simulators if crashing the simulated plane does not prohibit continued practice? More pointedly: at what stage does failure (or lack of success, perspicacity, insight...) in various learning activities count against, rather than in favour, of continuing practice? Our focus in asking this is not to legislate against any practitioners as such, but to scrutinise the selection of the learning activities themselves.

### **What do we Know about the Measurement of these Outcomes?**

In the roundtable, we want to discuss our plan of conducting a rigorous systematic review of the literature that describes health care professionals' education. In the review we will identify and characterise the outcome measures used to evaluate the education. After that we intend to present the findings of the review in an accessible manner so that educators can use the findings to guide the selection of appropriate outcome measures for CPE programs. This is significant in Australia, where health care professionals are exposed to a vast range of educational interventions. Many question the value of much that passes under the banner of CPE. This is probably similar to educational practices in other disciplines where CPE is mostly ad hoc and is rarely based on valid studies that show benefit of the education strategies used. While there are many apparently good reports of the value of particular educational interventions there are many quasi evaluations of dubious value. The test characteristics of the outcome measures used in these evaluations are rarely described; aspects of the outcome measures such as their reliability, sensitivity to

change and validity are remarkable by their absence. A strict methodology will be applied to searching the literature, selecting the articles, reading the articles (two readers), identifying and categorising the outcome measures, mediating reader selection and categorisation decisions, synthesising the results and writing up the study. We will limit the search to English language, international peer-reviewed professional journals that are listed on data bases ERIC, CINAHL, MEDLINE. A preliminary search for key writers in CPE (e.g. Cervero, Norman, Jarvis, Eraut) indicates that the studies will be found in the following journals: *International Journal of Lifelong Education*, *New Directions for Adult and Continuing Education*, *Journal of Continuing Education in the Health Professions*, *Journal of Instructional Development*, *Journal of Medical Education*.

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