Medical Board Ahpra

The evidence for change

Strengthening continuing professional development

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It is now accepted that assessing whether a doctor remains practising to an accepted standard must involve more than an assessment of their original credentials and should include review of what they actually do in their contemporary practice.[1]

Considerable attention has been focused on the assessment of medical students' and post-graduate trainees' competence before they start unsupervised practice. As a result, modern concepts of longitudinal multi-method 'assessment programs' have been developed. These are underpinned by considerable research data about characteristics such as validity, reliability, feasibility and the educational impact of the various modes of assessment that may be used.[2 3]

Since the 1970s, the concept of continuing post-graduate education to 'facilitate the full performance of practitioners in the diverse practice of professional work'[4] has been a fundamental principle in the medical profession. In addition to didactic education such as lectures, the medical profession has engaged with and investigated the effects of different educational models based on clinician practice.

The role of adult learning principles has been a successful underpinning theory supporting the assimilation of new knowledge and skills in CPD. Related principles include the concept of self-directed learning and reflection.

More recently, Knowles derived principles of adult learning that are commonly recognised as guidelines on how to support learners who tend to be at least somewhat independent and self-directed.[5] Kaufman summarised his principles as follows:

- adults are independent and self-directing
- they have accumulated a great deal of experience, which is a rich resource for learning
- they value learning that integrates with the demands of their everyday life
- they are more interested in immediate, problem-centred approaches than in subject-centred ones, and
- they are more motivated to learn by internal drivers than by external ones.[6]

Kaufman points out that 'self-directed learning' can become a method for organising teaching and learning, in which the learning tasks are largely motivated by the learner (as with the adult learning principles described above).

Kaufman also summarised traits associated with self-directed learning developed from Candy as follows:

> *… the ability to be methodical and disciplined; logical and analytical; collaborative and interdependent; curious, open, creative, and motivated; persistent and responsible; confident and competent at learning; and reflective and self-aware (p. 213).*[7]

Donald Schön was instrumental in developing the concept of reflective practice.[8] He proposed two main components of reflection: 'reflection in action', which occurs during an unexpected event, and 'reflection on action', which occurs after an event. The latter includes analysing the event/s behaviours/activities and determining what alternative strategies could have resulted in a better outcome.

Kaufmann integrates these three approaches to thinking about learning in his *principles to guide educational practice (abridged p. 215)* [9]:

- the learner should be an active contributor to the educational process
- learning should closely relate to understanding and solving real life problems
- learners' current knowledge and experience are critical in new learning situations and need to be taken into account
- learners should be given the opportunity and support to use self-direction in their learning
- learners should be given opportunities and support for practice, accompanied by self-assessment and constructive feedback from teachers and peers, and
- learners should be given opportunities to reflect on their practice; this involves analysing and assessing their own performance and developing new perspectives and options.

These interrelated principles have been instrumental in shaping contemporary thinking about CPD in the health professions. Over the past four decades, an increasing number of research studies have sought to understand the link between these approaches to physician education and the consequences for physician performance and patient healthcare outcomes.

Bloom investigated the effects of continuing education on physician clinical care and healthcare outcomes.[10]

In his examination of 26 systematic reviews, he analysed the impact of eight educational methods:

- didactic teaching
- reading printed materials
- listening to opinion leaders
- using clinical practice guidelines
- engaging in interactive education
- audit and feedback on results
- academic detailing, and
- reminders.

All reviews investigated the effects of various approaches on physician performance and some reviews investigated the impact on patient health outcomes.

The most valuable methods were interactive, including audit of patient data with feedback on results, academic detailing, interactive educational events, and reminders, all of which demonstrated an impact on performance improvement and improved patient outcomes. A moderate effect was found for clinical practice guidelines and opinion leaders. However, didactic presentations and printed materials alone were shown to have little or no beneficial effect on either performance or outcomes.

Cervero and Gaines[11] have recently synthesized eight new systematic reviews of the literature about the effectiveness of CPD (referred to in their paper as CME), published since a 2003 review.[12] They concluded that CPD:

- is able to improve clinician performance and patient health outcomes
- has been shown to be more reliably positive in its impact on clinicians' performance than it has been on patient health outcomes. The effect of CPD on patient outcomes has been more difficult to demonstrate due to the complexity of intervening variables, and
- leads to greater improvement in physician performance and patient outcomes if it is interactive, uses more methods, involves multiple exposures, is longer, and is focused on outcomes that are considered important by clinicians.

In summary, Cervero and Gaines concluded that exposure to multiple modalities and multiple events will increase the likelihood of a change in performance and subsequent change in patient health outcomes. Their findings infer that educational interventions that are based on the concept of a performance improvement process involving feedback from ongoing, multimodal, interactive education and performance assessment, delivered sequentially, is more important than single or isolated educational events.

These systematic reviews demonstrate that the ability of CPD to create changes in performance or health outcomes is critically dependent on how it is designed and presented to learners.

When standards for mandatory CPD require little more than documentation of attendance for the purpose of certification, registration or credentialing, the effectiveness of the activities undertaken are variable. Moore et al. pointed out that in recent years there has been a steadily increasing discomfort about this uncertainty. The MBA has already responded to this by moving to a more specific description of CPD that involves hours and specifies a mandatory 'practice-based reflective element' for doctors holding general registration.[13]

McMahon discusses how accredited CPD organisations have evolved substantially to meet these challenges over the last 15 years.[14] He points out that although educational planners increasingly construct activities related to adult learning theories and practice needs, much of this evolution is not visible to the learner. The example that he gives is that in the US, of the more than 140,000 learning activities offered by accredited organisations under the umbrella of the Accreditation Council for Continuing Medical Education (ACCME), approximately 60 per cent are designed to achieve improvements in physician performance, with 40 per cent of these courses measuring subsequent change. A further 30 per cent of the courses are designed to improve patient outcomes, with 13 per cent of courses measuring those changes.[15] Despite such developments in providing more sophisticated and evidence-based CPD, McMahon has argued that there is still room for more flexibility and innovation in CPD, so it meets both practice-based needs and quality improvement of healthcare.

Cervero and Gaines have contended that the current status of research demonstrates how to promote desired outcomes, while the mechanism by which these outcomes are achieved is at an early stage and needs to be better understood. They have pointed out that although we now know what types of CPD are effective, the highest level of evidence, being the systematic reviews, do not explain what strategies are most effective, under which conditions, and for what purposes.

They summarise the status of the literature, as follows:

> *… we now have 39 systematic reviews that present an evidence-based approach to designing CME so that it is more likely to achieve the outcomes of improved physician performance and patient health outcomes. With this significant evidence-base about CME effectiveness, in tandem with numerous reports of practical strategies for effective CME, reforming the landscape of CME is less about what we know of its effectiveness and more about a political problem of changing the systems of which CME is an important constituent element. (p. 136)* [16]

Similarly, Moore et al. maintain that it is timely for CPD providers to examine the characteristics of their CPD programs to ensure that they contain the appropriate elements according to the evidence. They advise that:

> *The single most important change that providers can make involves providing opportunities for formative assessment during CPD activities by incorporating practice and feedback sessions. (p.13)*[17]

Clearly, activities being developed in New Zealand are designed to meet this challenge. The New Zealand RPR process promotes the ability of the individual doctor to reflect on feedback, make changes to their practice and assess these changes and their effects with a colleague. Such approaches to practice and feedback appear to be an important component of making CPD more robust and contribute to effective revalidation.

Kopelow proposes that current knowledge provides an important message for planners and regulators of CPD.[18] In this regard, the essential process is to design the evidence-based features of the educational interventions that are specifically and deliberately devised to bring about a change in clinician performance in their scope of practice.

There is an increased focus internationally on the role of a professional development plan (PDP) in guiding doctors to emphasise the relevance of their current and future practice demands and quality in assessing needs and planning their CPD activities. Self-assessment is critical to this process but a literature review has shown that, while suboptimal in quality, the preponderance of evidence suggests that physicians have a limited ability to self-assess accurately.[19] The authors therefore proposed that the processes currently used to undertake professional development and evaluate competence need to focus more on the results of external assessment. Examples include feedback from peer review, evaluation of outcomes based activities and high quality data based on standards.[20]

Lockyer et al. studied how doctors inform their self-assessment. They found that doctors use and interpret data and standards of varying quality as a basis for self-assessment. They concluded that doctors may benefit from regular and routine feedback and guidance on how to seek out data for self-assessment.[21]

Sargent et al. however have proposed that informed self-assessment is characterised by multiple tensions.[22] Mann et al. have studied the tensions that exist when informed self-assessment is used. In a qualitative study, they found that participants at all levels of medical training and practice experienced multiple tensions in informed self-assessment. Three categories of tensions emerged: within people (e.g. wanting feedback, yet fearing disconfirming feedback), between people (e.g. providing genuine feedback yet wanting to preserve relationships), and in the learning/practice environment (e.g. engaging in authentic self-assessment activities versus 'playing the evaluation game'). Multiple tensions, requiring ongoing negotiation and renegotiation, are inherent in informed self-assessment. They concluded that 'tensions are both intra-individual and inter-individual and they are culturally situated, reflecting both professional and institutional influences'.[23] This study emphasises the importance of leadership by CPD program providers in helping establish a culture and practice of informed self-assessment for professional development planning.

Identification of individual professional development needs should also take into account the knowledge of the doctor, the stage of progression in their career, their work requirements and other factors that can influence practise including risks and supports.[24] A written professional development plan (PDP) helps ensure that medical practitioners reflect on the

value and appropriateness of proposed CPD activities before and after undertaking them. The PDP process for CPD is conceptualised as informed self-assessment taking into account all factors that may influence doctors' fitness to practise.[25]

Strengthening continuing professional development: a conceptual model

In considering the assessment of doctors' performance at work, Klass[26] distinguished three relevant conceptual groupings within the 'umbrella' of CPD:

- educational activities relating to improving knowledge (which he views as proxy measures of performance)
- assessing doctors' performance in practice, and
- assessing patient outcomes.

The latter two groups represent actual or direct measures of a doctor's functioning in the real world.

The EAG has adapted Klass' interpretation to provide a conceptual model that identifies three types of CPD relevant to the Australian context. This is depicted in Figure 2.

Undertaking educational activities

Educational activities have traditionally been the major component of CPD and include activities such as lectures, presentations, conference attendance and reading that contribute to a doctor's maintenance, updating and broadening of their medical knowledge.

The EAG recognises the importance of educational activities for doctors maintaining and extending their medical knowledge throughout their career, particularly those activities that adhere to the contemporary adult learning principles and best practices described above.

Traditional educational activities alone such as didactic presentations are now considered insufficient to provide high quality CPD that will positively affect doctors' practice. Future CPD should enable doctors to focus on high-impact educational activities to ensure maximum effectiveness for their effort.

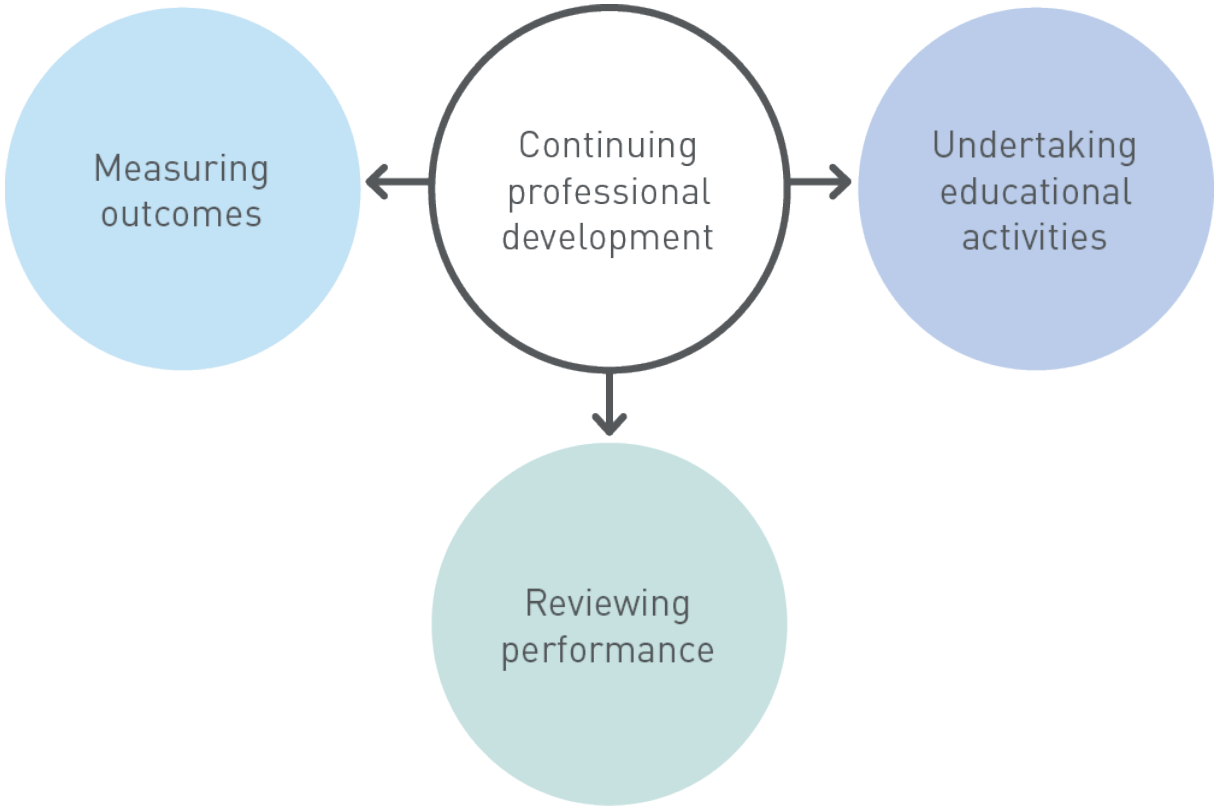

Figure 2: A conceptual model (Adapted from Klass 2007)

Online learning

Online learning provides vital accessibility for geographically isolated doctors. Online learning or e-learning approaches have been well supported in the literature for their effectiveness on knowledge, learner satisfaction and clinical decision-making.

E-learning CPD approaches that meet educational criteria discussed above including interactivity, feedback, multimedia and suitability for different learning styles are especially useful in the Australian context due to their convenience, accessibility and cost-effectiveness.

Casebeer et al. conducted an important randomised controlled study of the effectiveness of 114 online CPD activities in US doctors.[27] They assessed the evidence-based decisions made in response to clinical case presentations by physicians participating in online CME activities of various formats and compared those decisions with those of a similar group of physicians who did not participate in the CPD activities. The CPD online formats included case-based, multimedia and interactive text.

The study compared the evidence-based clinical choices of a group of 8,550 participant doctors with those of a demographically matched control group of 8,592 non-participant doctors. Following participation, physicians were asked to respond to a series of clinical case-based questions related to application of the CPD content to clinical practice.

They found that doctors who participated in the online CPD activities were more likely to make evidence-based clinical choices than non-participants in response to clinical case vignettes. Their findings translated into an increased likelihood overall of 48 per cent that physicians participating in these online activities were making clinical choices based on evidence. In terms of the educational activity, multimedia and interactive case-based activities were clearly the most effective.

The authors concluded that their findings were consistent with a recent meta-analysis[28], demonstrating that internet-based CPD improved participant knowledge, skills, and practice decisions, compared with no intervention and obtained outcomes that were comparable to those obtained after participation in traditional or face-to-face CPD activities.

Reviewing performance

Reviewing performance includes measures that focus on doctors' actual work processes with feedback. These include:

- direct observation by peers in the workplace
- peer review of medical records
- peer discussions including: clinical aspects of patient care, critical incidents and safety and quality reviews, and non-clinical aspects of care processes including time to first appointment, waiting times and scheduling, and
- multi-source feedback (MSF) provided by colleagues, co-workers and patients.

The role of peers, co-workers and patients together with their feedback is critical in this process.

Medical record review

Medical record (chart) review and discussions with peers based on the medical record (chart) have been used for many years to assess clinical performance. It has been shown in a study of randomly selected doctors in Quebec that peer ratings based on chart review alone achieve moderate levels of reliability but that some important information about quality of care is missed when only chart review is used compared to adding a discussion of aspects of the charts with the doctor concerned.[29]

The same group has published a more recent and useful study that directly addressed the optimal number of patient charts for an acceptably reliable assessment of general practitioners. Four professional peer assessors independently reviewed 15 patient charts for each of a group of 20 practising doctors. Statistical analysis showed that as few as 10 patient charts are sufficient for any assessor to obtain a reliable result. This suggests that generalisable assessments by a peer reviewer could be obtained in a relatively short time-frame, consistent with a task that could be performed during a practice visit.[30]

The Australian 'CareTrack' study, which used trained nurse assessors to review medical records against predetermined standards to establish quality of care among practising volunteer doctors, found that there were discrepant records in only 10 per cent of cases when comparing assessors against their trainer.[31] [32] It has been shown in a US study examining the medical record for adverse events that *overestimating* whether a necessary care action

was provided from the record is not likely to exceed 10 per cent.[33]

A systematic review of case audit has been performed, covering 26 papers reporting comparisons of two or three raters making independent judgments about the quality of care. Measured reliabilities were found to be higher for case-note reviews based on explicit, as opposed to implicit, criteria and for reviews that focused on outcome (including adverse effects) rather than process errors.[34] Similarly, strategies including emphasising outcomes measurement, providing more structured assessments to identify true differences in patient management, adjusting systematic bias resulting from the individual reviewer and their professional background, and averaging scores from multiple reviewers, have been suggested.[35] Continuing work on developing agreed clinical standards for index conditions, such as used in the CareTrack study[36] will provide explicit criteria to assist reviewers when assessing records and assist doctors in preparation for peer review.

Experience of medical record review in Canadian regulatory authorities

Canadian regulatory authorities have significant experience in the peer review of medical records in the doctor's surgery both as a CPD tool and as a method for early detection of performance issues. The peer review approaches used by medical regulatory authorities in Canada are detailed on pages 9 - 11.

Multi-source feedback

Multi-source feedback (MSF), also called '360-degree' appraisal, is a significant potential formative educational element of a strengthened CPD process in Australia. MSF has been identified as a promising method for evaluating doctors' performance at work.

MSF has also been employed as a screening approach to help determine which doctors may not be performing to an acceptable standard and may present a risk to the public. The value and effectiveness of MSF in both these contexts is now described.

MSF for educational purposes

MSF is based on surveys that are usually completed by three separate groups: colleagues, co-workers and patients. The doctor self-reviews at the same time, and compares their self-reflection with their actual results and usually the comparative results of peers. In many cases, the technique is accompanied by externally facilitated feedback. This process is seen as a positive way of driving CPD.[37]

MSF is being increasingly favoured as a way of assessing multiple components of professional performance, some of which are otherwise very difficult to assess. This is because MSF permits external evaluation of a doctor's performance on a wide variety of competencies and behaviours by three different groups including:

- colleagues who know about the doctor's practice
- co-workers (e.g. nurses, allied healthcare professionals or health-related administrative staff), and
- patients.[38]

Respondents in these three categories must have observed the doctor's behaviour in their everyday interactions or be the doctor's patients, so they can answer survey questions about the doctor's performance. Doctors also usually complete a survey questionnaire about their own performance so that their self-ratings are compared with others' ratings in order to examine directions for change.[39]

The surveys that are applied to each group vary in order to capture the most relevant information from each group. Figure 3 indicates the main attributes assessed by different MSF assessor groups.

While self-directed learning is a central plank of CPD, Davis et al., in a systematic review of the accuracy of physician self-assessment compared with observed measures of competence, concluded that the weight of the evidence suggests that doctors have a limited ability to accurately self-assess.[40] They proposed that the processes currently used to undertake CPD and evaluate competence may need to focus more on external assessment. Ferguson et al. in their systematic review of MSF found that higher levels of behaviour change are achieved through facilitated feedback.[41] Their review found that feedback generated from peer assessment has positive effects when the feedback came from credible peers or authoritative sources and included narrative comments.[42] The strongest effects have been found in studies where performance was evaluated and feedback given over longer periods of time.[43] Evidence suggests the skill of facilitated feedback from a respected peer, influences how a physician responds to their feedback, the level of reflection achieved, and handling of negative comments, all of which have been shown to significantly influence the level of change achieved.[44]

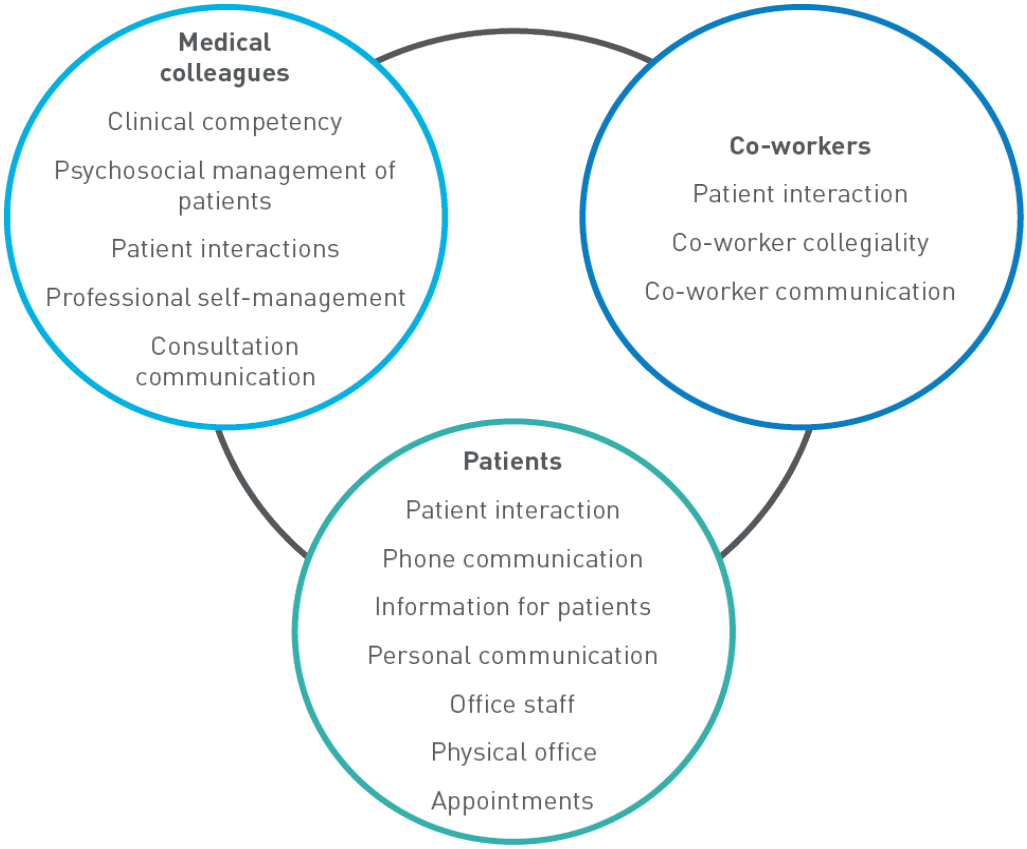

Figure 3: Attributes assessed by MSF assessor groups[45]

In a review of 64 studies that aimed to assess the performance of individual doctors, it was found that MSF is the most feasible method in terms of costs and time.[46] Lockyer proposed that MSF is not a replacement for audit when clinical outcomes need to be assessed. However, when interpersonal, communication, professionalism, or teamwork behaviours need to be assessed and guidance given, it is one of the better tools that may be adopted and implemented to provide feedback and guide performance.[47 48]

Several recent studies have examined the reliability of MSF. In emergency medicine and psychiatry, MSF was applied to 25 patients, eight co-workers, eight medical colleagues, and the doctor, respectively, using five-point rating scales along with an 'unable to assess' category. Items addressed key competencies related to communication skills, professionalism, collegiality, and self-management. Reliability was acceptable (patients) to high (colleagues and co-workers).[49 50] Slightly lower reliabilities were obtained from a similar study of anaesthetists.[51]

In the UK, Campbell et al. have investigated the utility of the GMC patient and colleague MSF questionnaires in assessing the professional performance of a large sample of UK doctors in a range of UK clinical practice settings.[52] The study was applied to 1065 volunteer non-training grade doctors from various clinical specialties and settings, and 17,031 of their colleagues. They found that to achieve acceptable levels of reliability, a minimum of eight colleague questionnaires and 22 patient questionnaires are required. Older doctors had lower patient-derived and colleague-derived scores than younger doctors. They argue that such approaches could potentially identify a minority of doctors whose practice should be subjected to further scrutiny.

In a new study conducted in the Netherlands, using questionnaires derived from the Alberta Physician Achievement Review (PAR) described below, it was found that only two per cent of variance in the mean ratings could be attributed to biasing factors. As suggested by Davis et al.[53], doctors' self-ratings were not correlated with peer, co-worker or patient ratings in this study. However, ratings of peers, co-workers and patients were correlated. Five peer evaluations, five co-worker evaluations and 11 patient evaluations were required to achieve reliable results (reliability coefficient set at ≥ 0.70).[54]

Research in both industry and medicine shows that MSF systems with individualised results and peer feedback can result in improvement and adoption of new practices.[55 56] It has also been shown that planned interventions after feedback, such as coaching or mentoring, are

important to effect behaviour change especially when negative feedback has been provided.[57]

Campbell's study also examined relationships between scores. Doctors who received lower feedback scores from their colleagues were those qualifying outside of the UK or South Asia, those working in locum posts, and those not working as a general practitioner or in a consultant role (such as doctors in associate specialist or staff grade roles). The age, gender, and ethnic group of the doctor were not independent predictors of feedback scores from patients or colleagues, a result that the authors described as 'gratifying' and which is important potentially in a multicultural society such as Australia.

It should be noted that in MSF, differences have been found between responses according to respondents' background characteristics or context. Wilkinson et al., in a large study of MSF applied to UK doctors in training, showed that there were small differences in ratings associated with various colleague characteristics viz., different genders gave different mean scores, with male and female raters giving mean scores of 7.78 and 7.97, respectively. [58] These score differences, while fairly small, were statistically significant. There were also some relatively small differences according to the background of the rater. Similarly Wright et al., in a UK study, found that co-workers who had more contact with the individual doctor were also more likely to provide more favourable feedback.[59] While these differences appear small, it is therefore not advisable to use MSF as the sole measure of a doctor's performance in practice. Despite this caution, MSF is feasible and cost-effective, has high reliability with small numbers of respondents, demonstrates validity and is capable of assessing important broad competencies that are difficult to otherwise assess, such as communication, interpersonal skills and teamwork, professionalism and collegiality.

The Council of Academic Hospitals of Ontario (CAHO), while not a regulatory authority, implemented the Physician Quality Improvement Initiative (PQII) where member hospitals use MSF for all medical staff. The results were not used for credentialing or re-appointment purposes. Using the PAR instruments, surveys were administered and collated. Feedback, professional development and coaching were provided confidentially by the department head and the individual doctor sees their own results compared with de-identified peers, and a threshold score.[60]

Wetlandt et al have concluded the PQII provides an opportunity for physician development, affirmation and reflection, as well as a structure to further departmental quality improvement, best practices, and finally, an opportunity to enhance communication, accountability and relationships between the organisation, department chiefs and their staff.[61]

MSF for regulatory screening purposes

MSF for regulatory screening purposes as well as educational purposes has been used and studied extensively in a number of Canadian regulatory authorities.

Alberta

In 1999, the College of Physicians and Surgeons of Alberta (CPSA) originally developed and standardised the longstanding process known as the PAR – which was a MSF program for family physicians.[62]

Working with the Universities of Calgary and Alberta through a comprehensive consultative process involving physicians, patients and other healthcare professionals, with extensive psychometric testing and analysis of tools, the CPSA developed and refined broad categories of physician performance domains and specific questionnaire items within those domains.

The CPSA then developed and implemented specialty-specific PAR programs for a wide range of specialties such as surgeons, paediatricians, anaesthetists and IMGs. Results from implementation of each set of these PAR tools have been published in peer reviewed journals.[63]

Participation in PAR was mandatory for continued licensure in Alberta from 2001 to 2016. The process required physicians to participate in the performance review process every five years. The original PAR processes involved a set of questionnaires completed by 25 patients, eight physician colleagues and eight non-physician healthcare co-workers.

These numbers have been validated by research,[64] [65] although some authors have suggested that 25 patients may be insufficient.

PAR covered five physician attributes:

- clinical knowledge and skills
- communication skills
- psychosocial management
- office management, and
- collegiality.

For doctors working in laboratory medicine and diagnostic imaging, questionnaires were given to referring physicians rather than patients. Members of the Physician Performance Committee (PPC), a nine-member Council-appointed group, reviewed results.

Alberta's PAR program was an integral component of the Alberta College's revalidation strategy. The process primarily focused on practice quality and educational processes rather than a search for underperformance. However, about four per cent of the total group were further assessed including a formal peer review of their practice based on their results.[66] [67] The peer review process employed, included a practice visit, with direct observation and medical record (chart) review and a process of 'Chart Stimulated Recall' (a discussion based on the doctor's own patient records) and included one doctor visiting the practice. A specialist familiar with the physician's type of practice conducted visits for surgeons, medical specialists and anaesthetists.

If the peer review again raised concerns about underperformance, a stepped process continued where the doctor might be required to remediate and/or undertake a more detailed assessment of clinical knowledge and skills including assessments of professional knowledge and skills, communication skills, professional ethics and practice management and the doctor's own mental and physical health.

The PAR process was specifically regulated so that it did not lead directly to disciplinary action or investigation without the involvement of the doctor concerned through stepped processes for further scrutiny if required. The CPSA view was that it had an obligation to recognise serious concerns, or performance problems through the process, while treating the process of feedback and/or a remediation of individual needs as a supportive model. While primarily focussed on feedback to the majority for performance improvement and reflection, the process was also intended to identify a small group of potentially underperforming doctors for further scrutiny.

Since 2017, the CPSA's original PAR process has now been superseded and replaced by a mandatory five yearly process MSF+, using a broader range of tools for competency assessment including a professional development plan, a revised MSF approach (MCC360)[68], and peer review or audit.[69] The new process is described further on page **Error! Bookmark not defined.**.

Nova Scotia

In 2000, the College of Physicians and Surgeons of Nova Scotia (CPSNS) decided to adopt the Alberta PAR MSF program and initiated an extensive testing, communication and orientation process prior to its implementation in 2005. Like Alberta, the Nova Scotia PAR (NSPAR) program is currently also transitioning to a broader process called an enhanced physician peer review program (PPR-NS). This was launched in 2017 and NSPAR will now cease to operate. The new process now emphasises peer review and professional development planning as follows:

A standard PPR-NS peer review will include:

- an on-site visit, assessing and providing feedback on a physician's practice facility, processes and procedures, documentation and patient care
- a discussion of the various risk and supportive factors, unique in profile to each physician's practice, which may influence long-term quality, and
- a review of the physician's approach to practice improvement, introducing strategies for linking professional development to potential gaps in practice.[70]

Off-site peer review may be offered in lieu of on-site review where doctors whose practice profiles include multiple 'protective factors' i.e. those known to promote quality in practice. The concepts of risk and supports are discussed further on page **Error! Bookmark not defined.**. The CPSNS expects this delineation to direct its resources where they may be most needed, i.e. a risk-based approach.

In addition, there is a reflective approach to the CPD component where participants are asked to consider their approach to CPD and to then adopt best practices for quality improvement in their individual practice environment.[71] The overall program outcomes are described as 'directive when necessary', so that in limited circumstances, such as a review uncovering a safety issue, the program can direct a doctor to take certain actions to improve their practice.

The PPR-NS process will require doctors to make themselves available for review every seven years.

Manitoba

In 2011, Manitoba adopted the PAR process. Beginning in 2011, all Manitoba physicians who have practised medicine in the province for at least three years were required to participate in, i.e. make themselves available for – the Manitoba PAR (MPAR) process about once every seven years. Once selected, physicians must, by law, complete the MPAR assessment. Each year, approximately 14 per cent of Manitoba physicians are surveyed.[72] It is reported that approximately 10 per cent of assessed physicians may require or request further practice improvement and/or professional development assistance based on the findings of their MPAR assessment. This assistance could take the form of a telephone interview and/or a peer review practice visit.[73]

British Columbia

In British Columbia, the College of Physicians and Surgeons (CPSBC) has a long-standing program known as the Physician Practice Enhancement Program (PPEP). The assessment process begins with a pre-visit questionnaire followed first by a MSF process based on the PAR tool. A Peer Practice Assessment (PPA) of recorded care and finally an office assessment follow this.[74]

Physicians working in a 'collegially unsupported' or solo practice environment, as well as physicians over the age of 70 years, are prioritised while the majority of physicians are randomly selected and, for efficiency, all physician colleagues working at the same clinic are assessed at the same time.

The Physician Practice Enhancement Panel of the Quality Assurance Committee sets the assessment cycle. It is based on the review of the initial assessment and may take place on average every seven to eight years. Physicians aged 70 or above, however, are automatically assessed more frequently on a three-year assessment cycle.

All information collected through the PPEP is confidential, protected, and is used by the program to guide learning; however, in some instances, the results will be used to direct recommended outcome activities. Without a physician's permission, it is stated that the information gathered through PPEP cannot be shared with other areas of the college, including any disciplinary processes.

Measuring outcomes

Measuring outcomes for most doctors includes investigating the outcomes of doctors' everyday work by analysing and reflecting on data about their patients' health outcomes. The sources of data for this activity might include critical incidents, commendations, audit of specific indicators of patients' outcomes such as immunisation rates or chronic disease indicators, adherence to standards of care, morbidity /mortality reviews, timely access to care, prescribing patterns, and individual or team data on mortality and morbidity statistics such as postoperative infection rates/other procedural outcomes. At the regulatory end of the spectrum, patient complaints, notifications or malpractice claims will provide important information.

Audit and feedback

Audit and feedback form a common approach to assessing and evaluating changes based on patient outcomes. Reflective practice encompasses collecting patient outcome data, reflection on practice and review of feedback from peers, colleagues and co-workers. It provides an opportunity to improve both practitioner and unit/team/organisational practice.[75] [76] [77]

Clinical audit is defined as a process that seeks to improve patient care and outcomes through a systematic review of care against explicit measures and the implementation of change in practice if needed.[78] The main aim of clinical audit is to measure how well something is done rigorously and to provide feedback to improve local clinical care.[79]

Some studies have found that clinical audit with feedback is effective in changing physician care and patient outcomes.[80] [81] However, the practice of audit and feedback in healthcare professional practice has not consistently been found to be effective.

Ivers et al. have conducted a large Cochrane systematic review of 140 studies, to help explain the variability in performance changes and types of audit and feedback for health practitioners.[82] They found that variations could be seen in how frequently audit feedback was given, who administered the audit/feedback, if it was in writing or verbal, and the expected goals after feedback. The authors concluded that, although only small changes were made throughout the process, they were potentially very important.

Changes in the effectiveness of audit varied mostly due to alternative ways of delivering feedback. Clinical audit was most effective when health professionals were not performing

well to begin with; the audit included clear targets and an action plan; the audit was effectively facilitated by the relevant organisation and was conducted by a respected and/or familiar supervisor/colleague with relevant knowledge.

Other authors have suggested that the uncertainty in published research is as a result of ineffective implementation.[83] [84] The most common identified barriers to the effectiveness of audit in improving care are:

- poor management
- lack of audit/organisational support
- excessive workload, and
- time constraints.

These barriers may be overcome by improved support for doctors in accessing their patient outcome and/or practice-based data. This could occur at a number of levels:

- in-practice support, including extraction of accurate data from medical records software
- local, institutional and regional support including providing comparative data, and
- national support including providing de-identified practitioner and comparative data from large data sets such as those held by Medicare.

The power of comparative data is that it clearly demonstrates outliers in practice. Enabling reflection against comparisons can facilitate discussion and lead to practice change. However, it is important that data provided are targeted to practice and practitioner needs, are manageable in scope, and are preferably reviewed on a regular basis to determine the impact of change.

The most effective use of doctors' time is clearly in reflection and feedback on their data and relevant comparisons, leading to practice change rather than simply the time spent to collect data. The current issues of inadequate availability of relevant data are discussed further below.

Audit has the potential to be a beneficial form of CPD, if organisational support and sufficient resources are in place. Further research is necessary to determine whether and how clinical audit is more effective if combined with other interventions.[85]

Strengthened CPD

Strengthened CPD, developed in consultation with the profession and the community, is the recommended pillar for revalidation in Australia. CPD is continuing to evolve. This section shows that CPD, when conducted according to evidence and principles underpinning best practice, is an important driver of practice improvement, better patient healthcare outcomes and will more effectively connect to future healthcare needs.

We now have the opportunity to strengthen Australia's CPD system for medical practitioners so that it is more effective, flexible and dynamic. Given the distribution of registered medical practitioners within and outside colleges, all proposed changes to strengthen CPD must apply to and be accessible to all registered medical practitioners.

Evidence-based activities are already in use in different Australian healthcare settings and in specialist college CPD programs. While college programs differ in style and substance, the EAG recognises that there is already considerable leadership available in different aspects of CPD in Australia. Many colleges continue to innovate actively in their CPD programs and monitor and enhance their program quality.

Profession-led collaboration between colleges about the way forward in Australian CPD would enable sharing of best practices and could lead to collaborative piloting of new interventions with shared evaluation activities.

The deliberate aims and high-level criteria for a nationally consistent approach to CPD for all colleges and providers needs to be clearly articulated. This will support collaborative development and maintain focus on the intended outcomes. Innovation in CPD should be encouraged. When new initiatives or innovations are implemented they should be evaluated as part of a focused and effective set of evaluation activities within and between colleges and providers.

Effective and efficient CPD programs will ensure that every doctor is supported by quality education relevant to their individual learning needs and scope of practice, so that the performance of all doctors and ultimately their patient outcomes will be enhanced throughout their careers. As doctors' careers progress, their scope of practice may alter. As a result, learning needs will change and so will the CPD activities required for different scopes of practice. CPD is therefore seen as a dynamic and evolving process throughout a doctor's career.

To achieve this, the EAG proposes to strengthen CPD by applying a set of guiding principles to shape all CPD for medical practitioners in Australia. High quality CPD programs:

- are evidence-based
- are based on a professional development plan
- are interactive, use multiple methods and involve multiple exposures
- focus on outcomes that individual doctors wish to attain and which support their individual practice
- aim to improve doctors' performance and behaviours and their patient outcomes
- emphasise the role of self-reflection
- provide credible and practical feedback
- are integrated with existing systems to avoid duplication of effort
- are led by the profession, and
- encourage collaboration within the profession.

Deriving a framework from the Klass model, the EAG proposes ensuring medical practitioners participate in three core types of CPD, with activities prioritised to strengthen individual performance based on professional development planning. All recognised CPD activities would adhere to best practice and support relevant educational activities, reviewing performance, and measuring outcomes.

Given the quality of the evidence now available, it is reasonable for regulatory standards to strengthen and give greatest weighting to requirements for CPD that meet best practice and are most likely to lead to desired outcomes. Conversely, attendance at didactic educational events and other activities that have not been shown to promote desired outcomes should be given the lowest weighting in a regulatory standard. Regulatory standards should not limit the activities that doctors undertake after they have met the standard.

Strengthened CPD should be developed in consultation with the profession and the community. It is essential to allow for such development to meet different standards successfully by enabling a transition phase.

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