Expert Advisory Group on revalidation

Interim report

The proposed approach to support medical practitioners to maintain and enhance their professional skills and knowledge and to remain fit to practise medicine

August 2016

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Acronyms

ACCME	Accreditation Council for Continuing Medical Education (USA)
AHPRA	Australian Health Practitioner Regulation Agency
AMC	Australian Medical Council
BAB	Branch advisory bodies (NZ)
Board	Medical Board of Australia
CAHO	Council of Academic Hospitals of Ontario
CAMERA	Collaboration for the Advancement of Medical Education Research Assessment
CI	Confidence interval
CME	Continuing medical education
CPD	Continuing professional development
CPSA	The College of Physicians and Surgeons of Alberta
CPSNS	The College of Physicians and Surgeons of Nova Scotia
CPSO	The College of Physicians and Surgeons of Ontario
DMS	Director of Medical Services
EAG	Medical Board of Australia Revalidation Expert Advisory Group
FSMB	Federation of State Medical Boards (USA)
GMC	General Medical Council (UK)
GP	General practitioner
HCE	Health Complaints Entity
HR	Hazard ratio
IAMRA	International Association of Medical Regulatory Authorities
IMG	International Medical Graduate
MCC	Medical Council of Canada
MCNZ	Medical Council of New Zealand
MD	Doctor of medicine
MPAR	Manitoba PAR
MSF	Multi-source feedback
National Law	The Health Practitioner Regulation National Law, as in force in each state and territory
NCAS	National Clinical Assessment Service (UK)
NHS	National Health Service (UK)
NSPAR	Nova Scotia PAR
OR	Odds ratio
PAR	Physician Achievement Review (Alberta)
PARS	Patient Advocacy Reporting System
PC	Practising Certificate (NZ)
PDP	Personal development plan
PIV	Professional inspection visit (Quebec)
PPEP	Physician Practice Enhancement Panel (British Columbia)
PRONE	Predicted risk of new event score
RPR	Regular practice review (NZ)
RR	Relative risk
USP	Unsolicited patient complaints
VEAB	Vocational education advisory bodies (NZ)

Definitions

Revalidation

General Medical Council, United Kingdom

Revalidation is the term used by the General Medical Council (GMC) in the United Kingdom since the mid-1990s. It is the process by which doctors in the UK demonstrate that their knowledge and skills remain up to date and that they are fit to practise in their chosen field and are able to provide a good level of care. It occurs through regular appraisals of doctors' performance and review of portfolios of evidence that they are undertaking continuing professional development.[1]

The International Association of Medical Regulatory Authorities

The International Association of Medical Regulatory Authorities (IAMRA) defines revalidation as 'the process by which doctors have to regularly show that their knowledge and skills are up to date, and fit to practise medicine'.[2]

The term 'up-to-date' refers to the concept of professional development and requires all doctors to be able to produce evidence of currency. The term 'fit to practise medicine' refers to an appropriate level of performance in the practice of medicine, linked directly to patient outcomes.

Revalidation is closely aligned with the term 'recertification' as used in other countries.

Unsatisfactory professional performance

The Medical Council of NSW discusses unsatisfactory professional performance as follows:

> *The professional performance of a registered medical practitioner is defined to be unsatisfactory if it is below the standard reasonably expected of a practitioner of an equivalent level of training or experience. In addition, the Medical Board of Australia has set out its expectations of registered medical practitioners in its document* Good Medical Practice: A Code of Conduct for Doctors in Australia*. The causes of poor performance are many and varied. Professional isolation and inattention to continuing professional development are common contributing factors.*[3]

Continuing medical education and continuing professional development

In international literature, the terms continuing medical education (CME) and continuing professional development (CPD) are frequently used interchangeably. In the past, the term CME was often reserved for traditional activities such as lectures, presentations, conference attendance and reading. In this report, a distinction will be made and the term 'traditional CME' will be used to refer to these traditional activities.

Otherwise, this report uses the umbrella term CPD to refer to the broad range of activities that is encompassed by modern definitions of both CME and CPD. Typical definitions are:

Continuing medical education

The United States' Accreditation Council for Continuing Medical Education (ACCME) defines CME as 'educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public, or the profession'.[4]

Continuing professional development

The Board has defined CPD as 'the means by which members of the profession maintain, improve and broaden their knowledge, expertise and competence, and develop the personal qualities required in their professional lives'.[5]

[1] www.gmc-uk.org/doctors/revalidation/9627

[2] International Association of Medical Regulatory Authorities. Revalidation [definition].www.iamra.com/glossary#revalidation (accessed April 2016).

[3] www.mcnsw.org.au/page/doctors--performance--conduct---health/professional-performance/

[4] www.accme.org/requirements/accreditation-requirements-cme-providers/policies-and-definitions/cme-content-definition-and-examples

[5] Medical Board of Australia Continuing professional development registration standard

Colleagues, peers, and co-workers

Colleague

In this report, colleagues are other medical practitioners with whom a doctor works and interacts, for example colleagues in practice and specialists to whom they refer patients.

Peer

A peer is a medical colleague of the same branch of the profession, grade or setting. In this report, peers are usually practitioners in the same area of specialty or sub-specialty practice.

Co-worker

In this report, co-workers include other health professionals or health-related professionals with whom doctors work and interact.

Peer review

The term 'peer review' is used in various ways. Even when citations use the term 'peer review' to denote the appraisal of one colleague by another, they do not necessarily define the exact process. Peer review has been defined as follows:

> *Peer review is the process by which individuals of the same profession, grade or setting, critically assess their colleague(s)' performance, in order to reinforce areas of strength and quality, and identify areas for development.*[6]

This definition highlights the: *context* of peer review (organisational, as opposed to an individual act of self improvement); *purpose* of peer review (to critically and systematically appraise, assess and monitor); *focus* of peer review (strengths, weaknesses and quality); *outcomes* (evidence, and recommendations for approval); and *participants* (colleague of same profession, grade or setting: although not necessarily all three

[6] Travaglia J, Debono, D. V. Peer review in medicine: a comprehensive review of the literature. University of New South Wales. Centre for Clinical Governance Research in Health. 2009. Centre for Clinical Governance Research, University of New South Wales, Sydney Australia

Executive summary

The fundamental purpose of revalidation is to ensure public safety in healthcare. The Medical Board of Australia's Expert Advisory Group (EAG) has identified two distinct components that will help achieve this in the Australian healthcare setting:

1. maintaining and enhancing the performance of all doctors practising in Australia through efficient, effective, contemporary, evidence-based continuing professional development (CPD) relevant to their scope of practice, and
2. proactively identifying doctors who are either performing poorly or are at risk of performing poorly, assessing their performance and if necessary, supporting their remediation.

An integrated approach will be most effective. CPD alone, however rigorous, may not identify the practitioner who may be putting the public at risk. A regulatory approach, however thorough, cannot reliably, single-handedly improve the quality of care provided by most competent doctors.

This report proposes a 'two by two' approach to revalidation in Australia:

- Two parts: strengthened CPD and proactive identification and assessment of 'at-risk' and poorly performing practitioners
- Two steps: engage and collaborate in 2016 + recommend an approach to pilot in 2017.

This 'two by two' model represents evolution, not revolution, in the requirements for doctors to make sure they provide safe care to patients throughout their working lives.

The two parts:

1. **Strengthened CPD**: Evidence-based approaches to CPD best drive practice improvement and better patient healthcare outcomes. Strengthened CPD, developed in consultation with the profession and the community, is a recommended pillar for revalidation in Australia.
2. **Identifying and assessing at-risk and poorly performing practitioners**: A small proportion of doctors in all countries is not performing to expected standards at any one time, or over time. Another group of practitioners is at risk of poor performance. Developing accurate and reliable ways to identify practitioners at risk of poor performance and remediating them early is critical, with considerable transformative potential to improve patient safety. It is equally critical to identify, assess and ensure there is effective remediation for practitioners who are already performing poorly.

The two steps:

- **August to November 2016**: With the Medical Board of Australia (the Board), engage and work with the profession and the community to discuss options to:
  - strengthen existing evidence-based approaches to CPD that best drive practice improvement and better patient healthcare outcomes, and
  - proactively identify at-risk practitioners and poorly performing doctors, to enable early intervention and tailored quality improvement.
- **By mid-2017**: Review what we have learned in discussions with the profession and the community and propose to the Board a more detailed approach for pilot, or as appropriate, rollout in Australia.

Guiding principles

Consistent with the intent of the Medical Board of Australia, the EAG recommends the following guiding principles will apply to all potential approaches:

- smarter not harder: strengthened CPD should increase effectiveness but not require more time and resources for participants
- integration: all recommended approaches should be integrated with – and draw on – existing systems where possible and avoid duplication of effort, and
- relevant, practical and proportionate: all recommended improvements should be relevant to the Australian healthcare environment, feasible and practical to implement and proportionate to public risk.

Part one: Strengthened CPD

CPD: a snapshot of the profession

Australia's 100,000-plus medical practitioners can be clustered into five broad groups in relation to CPD.

The groups are medical practitioners with:

a. specialist registration who participate in structured college CPD programs

b. general registration who participate in a relevant structured college CPD program

c. specialist registration who undertake self-directed CPD activities that meet college requirements

d. general registration who undertake self-directed CPD activities, and

e. limited, provisional or general registration, who are under supervision, in supervised practice or training programs.

The EAG does not have information about the actual distribution of practitioners within these groups. Current registration data indicate a significant proportion (around 55%) of medical practitioners hold specialist registration and are therefore required to meet the requirements of a specialist medical college CPD program. The EAG would like to seek more information about the actual distribution, through discussion with stakeholders.

Under current Australian regulatory requirements, all individuals in 'group e', i.e. those in training or under supervision, will progress to one of categories a – d over a fixed period.

The EAG believes that the structured training and supervision in place for 'group e' is adequate to protect patients, and to monitor and as needed to address the performance of individual practitioners. This interim report therefore focuses on options to strengthen CPD requirements for practitioners in groups a – d, to improve public safety in healthcare.

Strengthened CPD

Strengthened CPD, developed in consultation with the profession and the community, is a central focus for revalidation in Australia.

CPD is continuing to evolve. Led by the profession, in consultation with the community, we now have the opportunity to strengthen Australia's CPD system for medical practitioners so it is more effective, flexible and dynamic. Evidence-based and principles-based approaches will best drive practice improvement and better patient healthcare outcomes, and meet future needs. Given the distribution of registered medical practitioners within and outside specialist medical colleges, all proposed changes to strengthen CPD must apply and be accessible to all registered medical practitioners.

To achieve this, the EAG is proposing to strengthen CPD by:

1. **Applying a set of guiding principles to shape all CPD for medical practitioners in Australia. These guiding principles are:**

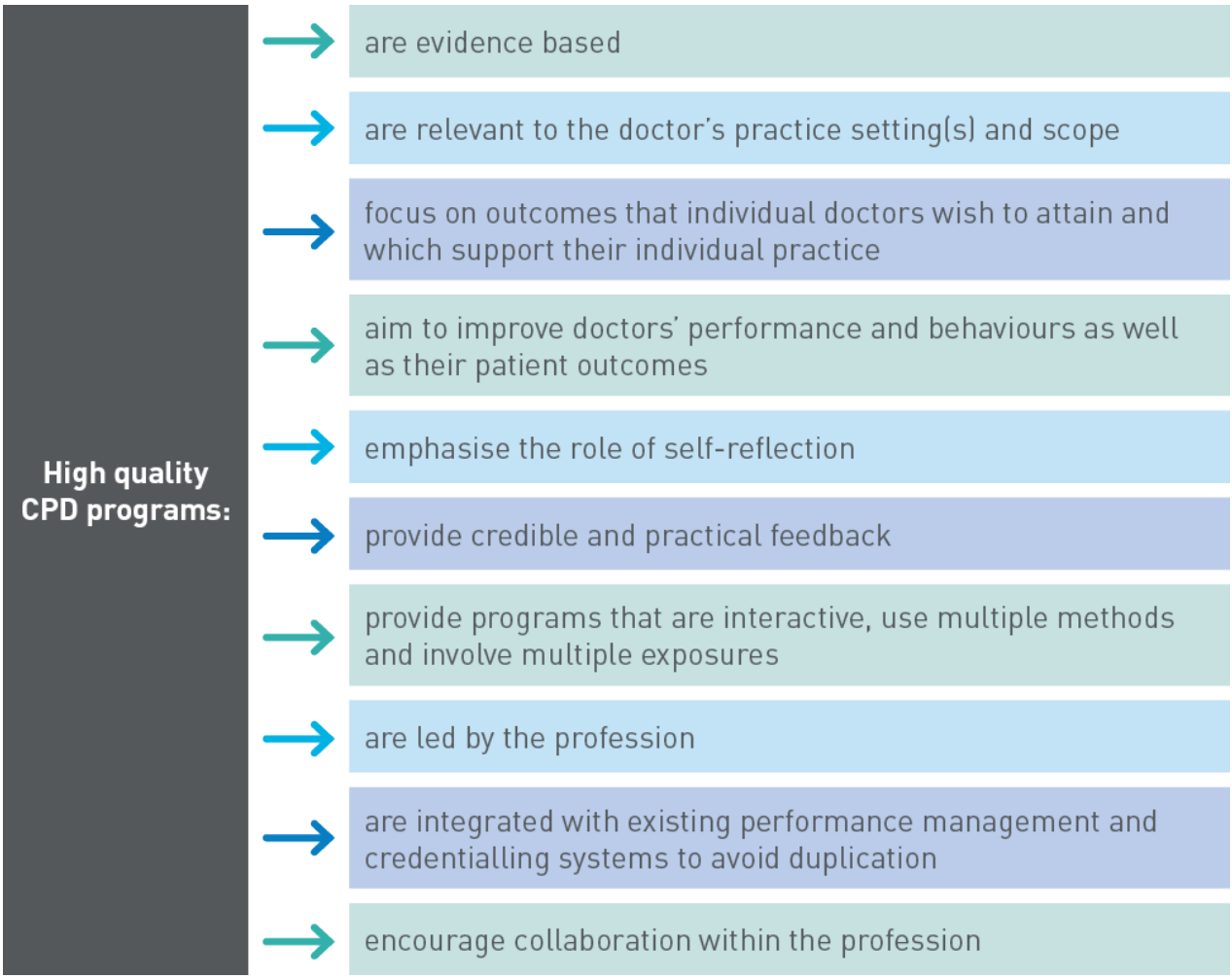

Figure 1: Guiding principles for CPD

2. **Ensuring medical practitioners in clinical practice participate in three core types of CPD, with activities prioritised to strengthen individual performance. All recognised CPD activities would be evidence-based and involve performance review, patient outcome measurement and validated educational activities. CPD would be broadly based, to improve all aspects of practice.**

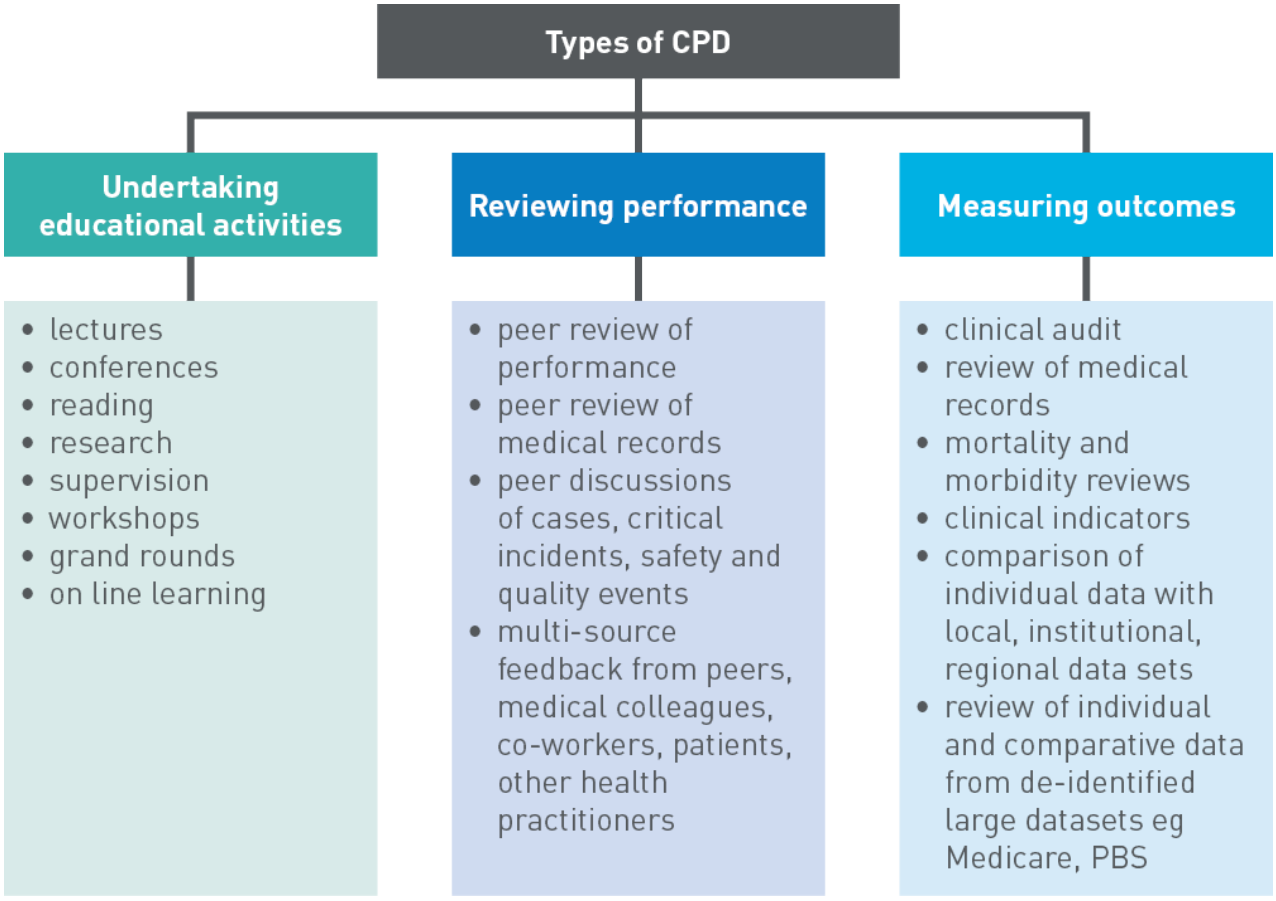

Figure 2: Types of CPD

Part two: Identifying and assessing practitioners at risk of poor performance and poorly performing practitioners

A small proportion of doctors in all countries is not performing to expected standards at any one time, or over time. Many practitioners found to be under-performing self-remediate or return to safe practice with local support. This is the preferred approach.

Another group of practitioners, however, is at risk of continued poor performance. To improve patient safety, improve practitioner performance and reduce the adverse impacts of patient complaints on complainants and doctors, it is critical to develop accurate and reliable indicators to identify at-risk and poorly performing practitioners, and when necessary, to intervene early with improved remediation processes.

It is equally critical to improve our ability to identify, assess and effectively remediate practitioners who are poorly performing, including those who are the subject of multiple complaints or notifications and are already at a high predicted risk of continued poor performance.

We do not know enough about the extent of 'at-risk' and poorly performing medical practitioners among those undertaking different types of CPD programs in Australia. The EAG proposes that strategies to effectively identify and assess 'at-risk' and poorly performing practitioners should apply across all categories.

Practitioners at risk of poor performance

Identifying risk factors

Prevention is better than cure. Developing indicators to identify 'at-risk' practitioners and being clear about actions to effectively assess them is critical, so effective interventions can follow.

The strongest risk factors associated with an increasing regulatory risk profile that have been identified and replicated both nationally and internationally are:

- age (from 35 years, increasing into middle and older age)
- male gender
- number of prior complaints, and
- time since last prior complaint.

Additional individual risk factors found in certain studies include:

- primary medical qualification acquired in some countries of origin
- specialty
- lack of response to feedback
- unrecognised cognitive impairment
- practising in isolation from peers or outside an organisation's structured clinical governance system
- low levels of high-quality CPD activities, and
- change in scope of practice.

Based on available evidence, the EAG believes that the time has come to deepen our understanding of factors that most reliably and practicably indicate practitioners at risk of poor performance that are relevant to medical practice in Australia.

We propose that there is now enough evidence to trigger discussion and draw on insights available about how various risk factors might be used to proactively identify practitioners at risk of poor performance in the Australian healthcare environment. Doing this could enable early intervention to protect the public and individual doctors from ongoing risk and improve the performance of these doctors. Deepening the understanding of the risk profiles of doctors who are already the subject of complaints or notifications using existing regulatory databases will provide a more accurate picture of risk indicators, improve ways to predict risk, and suggest the optimal timing and avenues for intervention.

Assessing individuals

Having identified the cohorts, or groups of practitioners at most risk of poor performance, it is important to then assess the identified individuals to determine whether and how the individuals actually pose a risk to public safety. Not all individuals in at-risk groups will be underperforming. Some practitioners who are identified as underperforming will return to safe practice simply through the process of being assessed and receiving feedback.

Robust early detection and remediation processes are anticipatory and preventive. They should be non-punitive, individualised and educational, designed to return the doctor to safe practice as soon as possible. The level of assessment of at-risk practitioners should be proportionate to the level of risk, consistent with the guiding principles. Examination-style assessment will not be effective in this task.

Tiered assessment

The EAG supports a tiered approach to assessment of performance, scaled to match the level of potential risk. A tiered, multi-faceted assessment strategy could start with multi-source feedback for low-risk cases, escalating through peer review and feedback processes, to more thorough in-situ evaluation to fully determine the nature of serious underperformance in doctors as required by the regulator. Cost-effective, early interventions should escalate only as needed.

1. Specialty-specific multi-source feedback (MSF) is the recommended starting point to assess whether practitioners in at-risk groups are performing safely, or are underperforming, or are poorly performing. The available evidence indicates that it is an effective and practical performance appraisal tool. MSF gained from colleagues, co-workers, and patients may provide a practical, cost-effective and efficient pathway for the early detection of doctors at risk of poor performance. It is consistent with the guiding principles outlined on page seven. Used effectively in CPD programs, it has been shown to identify gaps in both clinical and professional performance, to trigger self-reflection and to improve practitioner performance. It has also been used to help identify doctors who are not performing to accepted standards.
2. The next level of assessment – for doctors who may pose more serious risk – involves more intensive peer-mediated processes. This could include peer review of medical records, peer review of performance in practice, and/or facilitated feedback based on practice or outcomes data.
3. The highest level of assessment would align with extensive performance assessment, as can be mandated by regulators.

Comparing the results of MSF from 'at-risk groups' with results of MSF from practitioners not in at-risk categories will be important for benchmarking.

Poorly performing practitioners: identifying, assessing and remediating individuals

International research indicates that about six per cent of medical practitioners are poorly performing at any one time. No Australian research has yet reliably identified how many medical practitioners in Australia fall into this category. Future Australia-specific research should confirm this number. In the meantime, the EAG believes that action is required to identify, assess and where possible remediate all of these practitioners, in the public interest.

Responsibility for identifying and remediating under-performing and poorly performing practitioners in Australia needs further development and consensus.

Figure 3 depicts groups of medical practitioners in Australia in terms of their selected CPD framework and their practice context and the potential responsibility for supporting and managing remediation.

	Practice context	
CPD framework	Practising in an organisation with defined clinical governance structures	Practising outside a defined clinical governance structure
Specialist college CPD	**Shared – college and employer**	**College**
Outside a specialist college (self-directed CPD)	**Employer**	**?**

Figure 3: Potential responsibility for managing remediation

It is important to define accountabilities and responsibilities for identifying and acting on under or poorly performing practitioners. This would enable us to better understand and agree on which stakeholders have a role in assessment and a responsibility to act on the results of that assessment to improve or remediate performance. Other related issues raised include:

- the thresholds for reporting practitioners to regulators in the context of poor performance
- who is responsible for supporting and assisting the remediation of identified under-performers who are not referred to the regulator because they do not meet the threshold for regulatory referral
- how under or poor performance among practitioners who are outside colleges and work outside organisations with robust clinical governance structures are best identified and managed, and
- the barriers to information-sharing that, if cleared, would enable effective identification, remediation or other action to promote public safety.

Stakeholders who may have knowledge or concern about poorly performing practitioners are likely to include:

- patients
- peers
- colleagues and co-workers
- employers
- specialist colleges
- jurisdictions (health departments)
- insurers
- coroners
- other agencies with information that could identify 'outliers' (e.g. Medicare, agencies monitoring prescribing, etc.), and
- regulators and health complaints entities.

The role of the Medical Board of Australia and AHPRA and others in New South Wales and Queensland's co-regulatory jurisdictions is to manage risk to patients, within the framework of the National Law. The Board has clear powers to act, including by limiting the registration and therefore the practice of individuals, when the risk to patients is high. The Board's processes for assessing performance in specific cases are structured and systematised. The EAG is excluding the regulatory performance management of poorly performing doctors from its focus, and is focused instead on the roles and responsibilities of all health sector stakeholders for proactively identifying, assessing and managing the remediation of 'at-risk' and poorly performing practitioners to focus and drive prevention.

The EAG believes it is essential to develop a clear and shared understanding of the roles and responsibilities of the relevant stakeholders in identifying poor performers and acting jointly on that knowledge to better protect patients. It is important to create an integrated system in which health sector stakeholders with existing concerns about or knowledge of practitioners who are performing poorly clearly understand their responsibilities:

- to act on the knowledge or concerns that they have
- for information-sharing in the public interest, and
- to ensure effective intervention to support remediation or action to protect public safety.

Remediation

Remediation should also be tailored to the nature and level of the risk. The current knowledge-base about remediation processes and outcomes is not as well developed as knowledge about performance assessment processes, and is fragmented and diverse. Some studies have been conducted as stand-alone studies in areas of researcher or organisational interest. There is little information about long-term outcomes of remediation on doctors' subsequent performance. The lack of robust processes surrounding optimal remediation was recognised in the UK, with the formation of a Steering Committee on Remediation to assist thinking for revalidation. In Australia, equally, these weaknesses should be addressed. Continuing research to confirm the efficacy of remedial interventions will be needed.

Next steps

The EAG has been asked to advise on ways to develop an approach to revalidation that is tailored to the Australian environment and that will help make sure that the trust and confidence the community has in the medical profession is well founded. Ongoing evaluation of these approaches will be necessary to make sure that future strategies remain feasible, contemporary and in line with changes in the environment and the profession.

We look forward to discussion with stakeholders in the community and the profession about the approaches we have proposed in this interim report. All feedback and discussion will inform our final report and recommendations for action.

Introduction

The Medical Board of Australia (the Board) is responsible for regulating medical practitioners practising in Australia. Its role includes:

- registering medical practitioners and medical students
- developing standards, codes and guidelines for the medical profession
- investigating notifications and complaints about medical practitioners
- when necessary, conducting panel hearings and referring serious matters to Tribunal hearings
- assessing international medical graduates (IMGs) who wish to practise in Australia, and
- approving accreditation standards and accredited courses of study.

The Board is one of 14 National Boards in the National Registration and Accreditation Scheme (the National Scheme). The National Scheme is governed by the Health Practitioner Regulation National Law as in force in each state and territory (the National Law).

Protecting the public is the paramount principle guiding the Board's work. The National Law empowers the Board to ensure it sets standards so that Australia has a medical workforce that practises safely and provides high quality medical care.

In a number of jurisdictions around the world, including the United Kingdom, Canada and New Zealand, ongoing review of medical practitioners' fitness to practise occurs to ensure doctors maintain and enhance their professional skills and knowledge and provide safe, high-quality medical care. These processes are often called revalidation or recertification. Since 2012 the Board has consulted with the profession and the community about options for revalidation in Australia and has commissioned international research.

The Board is now considering how best to ensure medical practitioners in Australia maintain and enhance their professional skills and knowledge and remain fit to practise medicine.

The Expert Advisory Group (EAG), appointed by the Board to provide technical advice on options for revalidation in Australia, has considered international evidence and available Australian data.

This interim report outlines research on best practice, proposes an approach to ensuring all practitioners maintain and enhance their professional skills and knowledge, and identifies a range of next steps to proactively identify doctors at risk of not practising safely and to manage suitable interventions.

Background to revalidation in Australia

The Board started a conversation about revalidation in Australia in 2012. This has included consulting with the profession and the community and commissioning international research into revalidation options for Australia. The Board Chair, Dr Joanna Flynn AM, has said:

> *Regulation is about keeping the public safe and managing risk to patients and part of this involves making sure that medical practitioners keep their skills and knowledge up to date. The Board is seeking expert advice, as well as feedback from the profession and the community, about the most practical and effective way to do this that is tailored to the Australian healthcare environment.* [7]

In September 2015, the Board published research commissioned from the Collaboration for the Advancement of Medical Education Research and Assessment (CAMERA) on revalidation and announced the next steps.[8] The research report discussed the evidence for revalidation as a process for maintaining and enhancing practitioner performance and managing risk to patients. The report recommended some potential models for the Board to consider. The full report *The evidence and options for medical revalidation in the Australian context* is available on the Board's website.[9]

The Board then decided to progress its consideration of revalidation in Australia by:

1. Appointing an EAG to provide technical expert advice on revalidation and how any models recommended by this group can be evaluated for effectiveness, feasibility and acceptability. The EAG includes members with experience in medical regulation, performance management, assessment of medical practitioners, medical education, healthcare administration and safety and quality.
2. Appointing a Consultative Committee to provide feedback on issues related to the proposed introduction of revalidation in Australia. The Consultative Committee is chaired by the Chair of the Medical Board of Australia and includes representatives of the Medical Council of New South Wales, the Australian Medical Council (AMC), specialist medical colleges, medical schools, the Australian Medical Association and consumers.
3. Commissioning social research into what the profession and the community expect that medical practitioners should do to demonstrate ongoing competence and fitness to practise.

The terms of reference and membership of the EAG are at Appendix A and B. The terms of reference for the EAG and the Consultative Committee are available on the MBA website.[10] The Board will publish the results of the social research on its website.

The Board set an approximate 12-month timeline for the EAG to recommend one or more models for revalidation in Australia and to provide advice on how these can be piloted and evaluated. Details about models to be considered are included in the terms of reference.

In announcing the next steps, Dr Flynn commented that:

> *Trust and integrity are cornerstones of medical practice. Developing an approach to revalidation that is tailored to the Australian environment will help make sure that the trust and confidence the community has in the medical profession is well founded.*[11]

[7] www.medicalboard.gov.au/News/2015-09-15-media-statement

[8] ibid

[9] www.medicalboard.gov.au/Registration/Revalidation

[10] ibid

[11] www.medicalboard.gov.au/News/2015-09-15-media-statement

The purpose of revalidation in Australia

The fundamental purpose of revalidation is to ensure public safety in healthcare. The EAG has identified two distinct parts of revalidation:

1. To maintain and enhance the performance of doctors practising in Australia through efficient, effective, contemporary, evidence-based CPD relevant to their scope of practice.
2. To proactively identify doctors who are either performing poorly or are at risk of performing poorly, assess their performance and when appropriate support their remediation of their practice.

While these two parts are not mutually exclusive, the EAG proposes that they are distinct and should therefore be addressed separately. This is because CPD alone, however rigorous the requirements, may not identify practitioners who may be performing poorly and putting the public at risk. Equally, a regulatory approach, however thorough, cannot be relied on to single-handedly improve the quality of care provided by most competent doctors.

Recent commentators have pointed to the importance of separating out thinking about how to improve each of these parts. In *'a conversation about the role of medical regulators'* between Southgate and van der Vleuten, the latter argues:

> *But how do we achieve a competent workforce? It can happen only if the individuals in the workforce keep learning. In my view, the assurance of lifelong learning is the prime aim for which a regulator should strive. So the issue here is to develop assessment strategies that help learning. The next purpose for the regulator is to guarantee patient safety by safeguarding the public from incompetent individuals in the workforce. These two purposes should be separated, even firewalled, and treated differently in developing an assessment strategy.*[12]

Others have commented on how a lack of clarity of purpose may hinder system development. For example, Bismark has pointed to the tension that exists between 'poorly performing outliers' and quality of care provided by the majority of competent doctors.[13]

Speaking at IAMRA in 2014, Dr Flynn urged regulators to shift from being 'regulatory philosophers' to 'regulatory scientists' – with a focus on understanding and strengthening the evidence-base for regulatory decision-making.

[12] *L Southgate, CPM Van der Vleuten* A conversation about the role of medical regulators: Should our strategy of finding bad apples be similar to making the bright more shiny? We think not. Medical Education 48 (2), 215-218.

[13] mariebismark.com/2014/12/01/the-seven-qualities-of-highly-effective-regulators/

Revalidation in international jurisdictions

Revalidation, recertification or other similarly named systems are in place in a number of international jurisdictions, including the UK, some states in the United States of America, some provinces in Canada and in New Zealand. The way revalidation works in each jurisdiction differs, but all are designed to ensure doctors remain up to date, can demonstrate they are fit to practise in their chosen field and are able to provide a good level of care.

The CAMERA report, commissioned by the Board in 2015, *The evidence and options for medical revalidation in the Australian context: Final report* (Archer et al)[14] identified and analysed international examples of revalidation. Consistent with the EAG's terms of reference (Appendix A), this interim EAG report does not replicate existing work. Further information about international examples of revalidation is detailed in the CAMERA report available on the Board's website.

The General Medical Council (GMC) is currently undertaking a review of revalidation in the UK.[15] The author of the Board's commissioned research on revalidation, Archer (et al 2015),[16] writing about the UK context, maintains that 'no one has yet properly articulated what we are trying to achieve' in revalidation.[17] They found that although much energy has been employed into revalidation in the UK context, there have been too many prior assumptions made about the possible impact on patients and healthcare safety and quality. They proposed that such complex interventions, each with potentially different drivers, should be subject to a continuing evaluation of policy, process and outcomes.

[14] Archer, J., Pitt, R., Nunn, S., Regan de Bere, S., The evidence and options for medical revalidation in the Australian context: Final report. Collaboration for the Advancement of Medical Education Research and Assessment, Plymouth University Peninsula, 2015

[15] www.gmc-uk.org/doctors/revalidation/9610

[16] ibid

[17] Archer J, Regan de Bere S, Nunn S, Clark J, Corrigan O. "No one has yet properly articulated what we are trying to achieve": a discourse analysis of interviews with revalidation policy leaders in the United Kingdom. Acad Med. 2015 Jan;90(1):88-93.

Continuing professional development

CPD is one of the world-wide cornerstones of revalidation or other similar initiatives in place to make sure doctors maintain their skills and knowledge throughout their working lives.

Many of the specialist medical colleges in Australia are bi-national, operating in both Australia and New Zealand. Their CPD programs therefore need to be tailored to meet the registration requirements of both the Medical Board of Australia and the Medical Council of New Zealand (MCNZ). To provide the necessary context, this section outlines the CPD requirements currently in place in Australia and New Zealand.

CPD in Australia

The Medical Board of Australia develops registration standards that set out the requirements that applicants and registrants must meet to be registered. The first registration standard for CPD took effect on 1 July 2010. This standard has been reviewed and the revised standard is available on the Board's website and will take effect from 1 October 2016.

To meet the revised registration standard, practitioners must meet the requirements set out in the category that applies to them.

1. Medical practitioners who have specialist registration:
    a. must meet the requirements for CPD set by the relevant specialist medical college for every specialty in which they hold specialist registration. There may be CPD activities undertaken that fulfill the CPD requirements of more than one specialist college or specialty, and
    b. can only choose a self-directed program of CPD if that program meets the requirements for CPD set by the relevant specialist medical college.
    c. NOTE: Medical practitioners with both general and specialist registration are only required to complete the CPD requirements set by the relevant college (i.e. category 6 does not apply to them).
2. Medical practitioners who are Australian or New Zealand medical graduates and have provisional registration to undertake an accredited intern year must:
    a. participate in the supervised training and education programs associated with their position, and
    b. comply with any further requirements for training or supervised practice specified in guidelines issued from time to time by the Board.
3. Medical practitioners who are IMGs and have provisional registration must:
    a. if in an accredited intern position
        i. participate in the supervised training and education programs associated with their position
    b. if not in an accredited intern position
        i. complete CPD activities as agreed in their supervision plan and work performance report, and
        ii. complete a minimum of 50 hours of CPD per year (i.e. if their agreed CPD activities total less than 50 hours, additional CPD activities must be completed to reach a minimum of 50 hours), and
    c. comply with any further requirements for training or supervised practice specified in guidelines issued from time to time by the Board.
4. Medical practitioners who have general registration and are prevocational trainees or college vocational trainees must:
    a. participate in the supervised training and education programs associated with their position, and
    b. comply with any further requirements for training or supervised practice specified in guidelines issued from time to time by the Board.
5. Medical practitioners who have limited registration for postgraduate training or supervised practice, limited registration for area of need, limited registration for teaching or research or limited registration in the public interest must:
    a. complete CPD activities as agreed in their supervision plan and work performance report
    b. complete a minimum of 50 hours of CPD per year (i.e. if their agreed CPD activities total less than 50 hours, additional CPD activities must be completed to reach a minimum of 50 hours), and

c. comply with any further requirements for training or supervised practice specified in guidelines issued from time to time by the Board.

6. Medical practitioners who have general registration only (i.e. do not have specialist registration) must:

   a. complete a minimum of 50 hours of CPD per year (self-directed program), which must include at least one practice-based reflective element; clinical audit or peer review or performance appraisal, as well as participation in activities to enhance knowledge such as courses, conferences and online learning, or

   b. meet the CPD requirements of a specialist medical college that is relevant to their scope of practice.

CPD program accreditation

The AMC has assessed and accredited specialist medical education and training and professional development programs since 2002. From 2002 to July 2010, the AMC process for accreditation of specialist education and training programs was a voluntary quality improvement process in which all specialist colleges had agreed to participate. On 1 July 2010, this process became mandatory.

The National Law brings the accreditation of specialist training programs into the process for approval of programs for the purposes of specialist registration. Similarly, the Board's registration standards provide for CPD programs that meet AMC accreditation requirements and also meet the Board's CPD requirements.

While this is an Australian process, the MCNZ uses AMC accreditation reports to inform its decisions about recognising medical training programs in New Zealand. The AMC works with the MCNZ in reviewing bi-national training programs.

The AMC's Specialist Education Accreditation Committee oversees the accreditation process.[18] As medical colleges are treated as separate entities, CPD requirements vary across colleges both in time requirements and the nature of mandated or voluntary activities.

For practitioners in Australia who hold general registration and do not participate in a college program, the Board sets the requirements for a self-directed program. Currently, this requires a minimum of 50 hours to be spent in professional development activities, which must include a practice-based reflective element; clinical audit or peer review or performance appraisal; as well as participation in activities to enhance knowledge such as courses, conferences and online learning.[19]

Medical colleges work to ensure that doctors who participate in their CPD programs are meeting their requirements in typical ways, such as logging points and providing reminders and opportunities to attain points in required areas.

In addition, the Board randomly audits a proportion of all registered doctors each year, to validate their activities. If audited practitioners are required to provide documentary evidence to demonstrate that they have undertaken the required elements.[20]

CPD in New Zealand

To maintain the right to registration and be issued with a practising certificate, New Zealand doctors must meet recertification and CPD requirements. Recertification is defined by the MCNZ as the process to demonstrate competence as a condition of holding a Practising Certificate (PC).[21]

The MCNZ defines CPD in New Zealand as:

> *… involving yourself in peer reviews, audits of medical practice and continual medical education aimed at ensuring you are competent to practise medicine.*[22]

Requirements for CPD fall into two primary groups – vocational scope (usually fellows of a relevant college) and general scope (general registration without fellowship):

- vocational scope doctors are required to actively participate in the accredited college or vocational education and advisory body recertification program, and
- general scope doctors are required to either participate in an approved medical college training program related to their work, or arrange their own CPD with the help of a colleague (i.e. through a collegial relationship with a doctor who holds vocational registration in that area of medicine).

[18] www.amc.org.au/accreditation/medical-education

[19] www.medicalboard.gov.au/Registration-Standards

[20] www.medicalboard.gov.au/Registration/Audit

[21] www.mcnz.org.nz/maintain-registration/recertification-and-professional-development/

[22] ibid

Further, if a doctor chooses to arrange their own CPD through a collegial relationship, they must undertake 50 hours each year on CPD activities related to the work they are doing within their general scope, including:

- one audit of medical practice each year
- at least 10 hours a year of peer review, and
- at least 20 hours a year of CME.

In addition:

- a doctor's CPD must be referenced to the domains of practice (medical care, communication, collaboration and management, scholarship and professionalism) of the MCNZ's publication 'Recertification and continuing professional development'
- doctors must record their CPD on the MCNZ's forms
- their colleague must sign their PC application form each year, and
- if audited, the doctor must provide forms signed by their colleague, and evidence of completed MCNZ forms to show that he/she is meeting the MCNZ recertification requirements.[23]

The Medical Council of New Zealand regular practice review process

New Zealand is making a transition to include 'regular practice review' (RPR) in the processes used to 'recertify' doctors.[24]

One of the mechanisms that the MCNZ uses to ensure doctors are competent is the requirement for doctors to 'recertify' by participating in approved CPD programs provided by specialist medical colleges or vocational education advisory bodies (VEABs).[25] The MCNZ specifies that participation in CPD activities should deliver an improvement in the performance of doctors and better patient outcomes.

The MCNZ also believes that effective medical education for doctors should be based on their own work environment and individual practice.

The MCNZ's long-term goal is that all medical colleges or VEABs will adapt or expand on existing processes, or develop new processes, so that all doctors (except those in vocational training) will have the opportunity to undertake a form of RPR that is a formative assessment and does not duplicate existing processes.

The primary purpose of RPR is to help maintain and improve standards of the profession. RPR is viewed as a quality improvement process. However, the MCNZ also proposes that RPR may help identify poor performance that may adversely affect patient care. The goal of RPR is to help individual doctors identify areas for improvement in aspects of their performance, benefiting their individual professional development and the quality of care that patients receive.

The MCNZ's approach to RPR differs depending on whether a doctor is registered in a vocational or general scope of practice:

1. **Vocational scope:** The MCNZ is encouraging Branch Advisory Board's to develop RPR processes for doctors registered in a vocational scope of practice, and make these available as part of the CPD program on a voluntary basis.
2. **General scope**: The MCNZ has approved a recertification program for doctors registered in a general scope of practice, who are not participating in an accredited vocational training program. The recertification program includes RPR to be undertaken three yearly, with the first review to be undertaken three years after the doctor achieves registration in a general scope of practice.

The key principles of RPR in New Zealand include, but are not limited to:

- RPR is a formative process that provides feedback for each doctor to consider. It is a supportive and collegial review of a doctor's

[23] www.mcnz.org.nz/maintain-registration/recertification-and-professional-development/general-and-vocational-scope-doctors (accessed May 2016)

[24] www.mcnz.org.nz/assets/Policies/Policy-on-regular-practice-review.pdf (accessed May 2016)

[25] The NZMC offers the following explanation of a VEAB "For the different branches of medicine that specialist doctors work in, which we also call their vocational scope, a Branch Advisory Body (VEAB) offers advice and services to the Council by: (a) advising the council on education, training and international equivalence during the registration process for doctors seeking to work within a vocational scope of practice and, (b) providing programs of training, education, research, quality and safety policy, audits, practising resources, and advocacy, for the recertification of specialist doctors. Source: https://www.mcnz.org.nz/maintain-registration/recertification-and-professional-development/vocational-and-educational-advisory-body-veab/

practice by peers, in a doctor's usual practice setting

- the primary purpose of RPR is to help maintain and improve the standards of the profession. RPR is a quality improvement process. RPR may also help to identify poor performance that may adversely affect patient care
- RPR provides an assessment across the domains of competence outlined in *Good Medical Practice* (MCNZ's code of conduct), focusing on the area in which the doctor works
- RPR is informed by a portfolio of information provided by the doctor, which may include audit of patient outcomes and logbooks
- multi-source assessment (MSF) forms part of a RPR
- RPR must include some component of external assessment, that is by peers external to the doctor's usual practice setting
- RPR must include a process for providing constructive feedback to the doctor being assessed
- the profession will lead RPR, with support and assistance from the MCNZ.

The MCNZ are encouraging each medical college or VEAB to develop a RPR process using specific tools relevant to that specialty. Alternatively they may expand on existing VEAB processes or tools that the MCNZ has already developed, to include MCNZ's principles of RPR. The VEABs will make the process available to doctors on a voluntary basis (in the vocational scope of practice only).

The MCNZ will assess and provide feedback about the RPR process when accrediting a medical college or VEAB CPD program. The organisation or VEAB responsible for undertaking the RPR must have a process for assisting the doctor to identify and address learning needs.

A core component of RPR is the development of a personal development plan (PDP) after the RPR process.

When areas of practice needing work are identified, colleges work with the doctor to ensure their CPD activities address any deficiencies, including:

1. When there are small areas of a doctor's practice identified that need improvement, doctors will often be able to ensure that their CPD activities are targeted to those areas, with the assistance of a PDP.
2. If the areas identified are more significant, the medical college or VEAB or organisation providing the recertification program will need to work closely with the doctor to ensure CPD activities address the deficiencies.
3. When reviewers have concerns that a doctor's practice is placing patient health and safety at risk, then the reviewers and the medical college or VEAB have a professional obligation to report this separately to the MCNZ, just as they would do if the poor performance had been identified in any other way. MCNZ will consider the information through its usual processes and consider whether a performance assessment is necessary.

The MCNZ has published a statement '*What to do when you have concerns about a colleague*', which outlines how issues of this nature should be addressed.[26]

The MCNZ audits 15 per cent of doctors every year to ensure they are complying with their professional development and recertification requirements.

[26] www.mcnz.org.nz/assets/News-and-Publications/Statements/Concerns-about-a-colleague.pdf

Revalidation: proposing an approach for Australia

An important factor to consider in designing any revalidation model for Australia, or 'the conundrum' as Hawkes has observed in discussing the UK context is, 'how to identify (underperforming) doctors without subjecting the rest to time-consuming and needless procedures'.[27]

It is particularly important that any potential approach to revalidation in the Australian context is designed specifically for the Australian health system. Revalidation systems must be based on the best available evidence and be fundamentally relevant to the everyday work of doctors in the Australian health system. Any future revalidation system must have a clear purpose.

Guiding principles

Consistent with the intent of the Medical Board of Australia, the EAG recommends the following guiding principles will apply to all potential approaches:

- smarter not harder: strengthened CPD should increase effectiveness but not require more time and resources for participants
- integration: all recommended approaches should be integrated with – and draw on – existing systems where possible and avoid duplication of effort, and
- relevant, practical and proportionate: all recommended improvements should be relevant to the Australian healthcare environment, feasible and practical to implement and proportionate to public risk.

Two-part approach

With these principles in mind, the EAG proposes that the model for revalidation in the Australian context addresses the two distinct parts of:

1. Continuing Professional Development, and
2. Early and proactive identification of doctors at risk of poor performance and of those who are already performing poorly.

These two parts are discussed in more detail in each section of this interim report.

[27] Hawkes N. Revalidation seems to add little to the current appraisal process. BMJ 2012; 345: e7375.

Part one:
Continuing professional development

Introduction

The concept of CPD for medical practitioners is based on the fundamental premise that requiring individual practitioners to undertake a variety of professional development activities will ensure they maintain and enhance clinical knowledge, skills and professional behaviours throughout their working lives. Therefore, improving all aspects of medical practice, in the broadest sense, form part of CPD.

High quality CPD is expected to lead to improvement in safety and quality of healthcare, because a lack of competence, or a deficit in performance, may contribute to medical error and patient harm. CPD is largely dependent on self-regulation by practitioners, whereby individual doctors must be able to demonstrate that they have met relevant standards.

The emphasis on self-regulation by practitioners has been a common theme for decades. It has been proposed that:

> *The driving force for an effective and efficient revalidation process should be the professional and ethical responsibility that each doctor has to their patients and to the society which has granted them the right to practice.*[28]

CPD represents a model for continuous improvement and therefore quality improvement in healthcare that has evolved significantly in Australia. CPD is compulsory in Australia, and in other countries such as New Zealand, the UK, and the majority of the Canadian jurisdictions. In these countries, it is a mandatory requirement for renewal of registration.

The Board's registration standard for CPD allows doctors to participate in the CPD program of their respective specialist medical colleges. Currently, all specialist medical colleges have defined requirements and models that are relevant to the scope of practice of their members. The AMC accredits colleges for all their activities, according to published standards.

Australia's 100,000-plus medical practitioners can be clustered into five broad groups in relation to CPD, outlined on page seven.

[28] Stephen N Bolsin, Elizabeth Cawson and Mark E Colson. Revalidation is not to be feared and can be achieved by continuous objective assessment, Med J Aust 2015; 203 (3): 142-144.

Optimal CPD: the evidence and practice

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 include what they actually do in their contemporary practice.[29]

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.[30] [31]

Since the 1970s, the concept of continuing post-graduate education to 'facilitate the full performance of practitioners in the diverse practice of professional work'[32] 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. [33] His principles were summarised by

[29] Norcini JJ. Current perspectives in assessment: the assessment of performance at work. Med Educ 2005;39:889.

[30] Epstein RM. Assessment in medical education. N Engl J Med 2007;356:387-96.

[31] van der Vleuten CP, Schuwirth LW. Assessing professional competence: from methods to programmes. Med Educ. 2005 Mar;39(3):309-17.

[32] Houle CO. Continuing learning in the professions. San Francisco, C A: Jossey – Bass; 1980.

[33] Knowles MS and Associates. Andragogy in action: applying modern principles of adult learning. San Francisco: Jossey-Bass, 1984.

Kaufman (2003).

Five assumptions about adult learning (after Kaufman 2003)[34]:

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

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).

Traits associated with self-directed learning developed from Candy[35] have been summarised by Kaufman 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)*.

Donald Schön was instrumental in developing the concept of reflective practice.[36] 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 as follows.

Kaufman's principles to guide educational practice (abridged p. 215)[37]:

- 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 (2005) investigated the effects of continuing education (CPD) on physician clinical care and healthcare outcomes.[38]

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.

[34] Kaufman David M. Applying educational theory in practice BMJ 2003; 326 :213

[35] Candy PC. Self-direction for lifelong learning: a comprehensive guide to theory and practice. San Francisco: Jossey-Bass, 1991.

[36] Schön DA. Educating the reflective practitioner: toward a new design for teaching and learning in the professions. San Francisco: Jossey-Bass, 1987.

[37] Kaufman David M. Applying educational theory in practice BMJ 2003; 326 :213.

[38] Bloom BS. Effects of continuing medical education on improving physician clinical care and patient health: a review of systematic reviews. Int J Technol Assess Health Care. 2005 Summer;21(3):380-5.

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 (2015)[39] 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.[40] 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 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 (2009)[41] point out that in recent years, there has been a steadily increasing discomfort about this uncertainty. The Board 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'.

McMahon (2015)[42] discusses how accredited CPD organisations have evolved substantially to meet these challenges over the last 15 years. 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 United States, of the more than 140,000 learning activities offered by accredited organisations under the umbrella of the 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.[43] 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[44] have contended that the current status of research demonstrates how to

[39] Cervero RM, Gaines JK. The impact of CME on position performance and patient healthcare outcomes: an updated synthesis of systematic reviews. Journal of continuing education in the health professions, 35 (2): 131 -138. 2015

[40] Robertson MK, Umble KE, Cervero RM. Impact studies in continuing education for health professionals: update. et al Journal of continuing education in the health professions 2003, 23 (3): 146 - 156.

[41] Moore DE Jr, Green JS, Gallis HA. Achieving desired results and improved outcomes: integrating planning and assessment throughout learning activities. J Contin Educ Health Prof. 2009 Winter;29(1):1-15

[42] McMahon GT. 2015. Advancing Continuing Medical Education. JAMA, 314(6):561-562

[43] Accreditation Council for Continuing Medical Education. 2014 annual report http://www.accme.org/news-publications/publications/annual-report-data/accme-annual-report-2014 accessed on June 6 2016.

[44] Cervero RM, Gaines JK. The impact of CME on position performance and patient healthcare outcomes:

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).*

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).*[45]

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 (2015)[46] proposes that current knowledge provides an important message for planners and regulators of CPD. 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.

Strengthening continuing professional development

In considering the assessment of doctors' performance at work, Klass[47] distinguished three relevant conceptual groupings within the 'umbrella' of CPD:

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

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

The EAG has adapted Klass' model to identify three types of CPD relevant to the Australian context. These are described in Figure 4.

an updated synthesis of systematic reviews. Journal of continuing education in the health professions, 35 (2): 131 -138. 2015

[45] Moore DE Jr, Green JS, Gallis HA. Achieving desired results and improved outcomes: integrating planning and assessment throughout learning activities.J Contin Educ Health Prof. 2009 Winter;29(1):1-15

[46] Kopelow M. Evidence-based regulation and accredited continuing medical education. J Contin Educ Health Prof. 2015 Spring;35(2):81-2. doi: 10.1002/chp.21286

[47] Klass D. Assessing Doctors at Work — Progress and Challenges. NEJM 2007 356;4. 414-15.

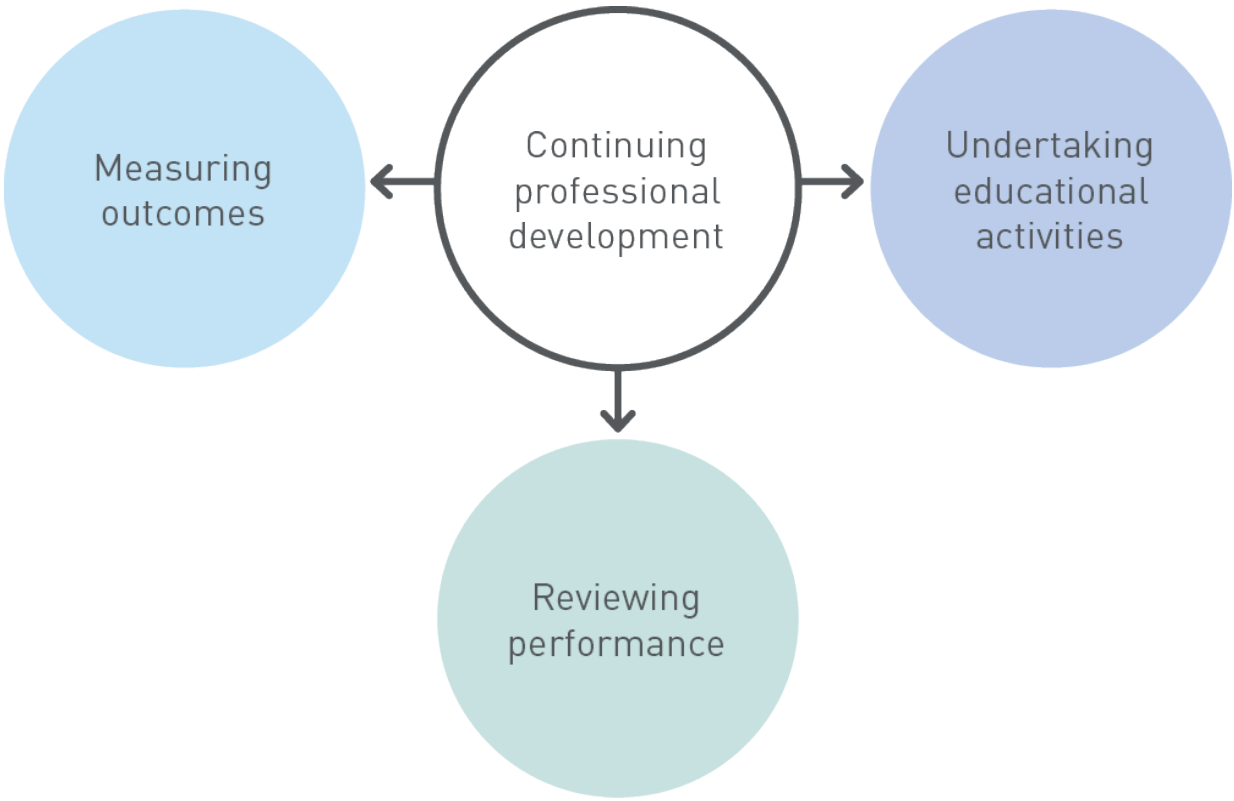

Figure 4: A conceptual model (Adapted from Klass 2007 op cit)

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 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 described in Kaufman (2003)[48] where the learning tasks are largely motivated by the learner.

Also of relevance is the types of learning described by Bloom (2005)[49] who identified the most valuable methods were interactive and could demonstrate an impact on performance improvement and improved patient outcomes. However, he found didactic presentations and printed materials alone were shown to have little or no beneficial effect on either performance or outcomes.

The EAG proposes that doctors should focus on high-impact educational activities to ensure maximum effect. Traditional educational activities alone such as didactic presentations are now considered insufficient to provide high quality CPD that will positively affect doctors' practice.

Measuring outcomes

Measuring outcomes includes assessing the outcomes of doctors' work by analysing and reflecting on patient outcome data. The sources of data for this assessment might include critical incidents, commendations, specific indicators of patients' outcomes such as immunisation rates or chronic disease indicators, timely access to care, prescribing patterns, individual or team data on mortality and morbidity such as postoperative infection rates/other procedural outcomes and patient complaints, notifications or malpractice claims.

Audit and feedback form a common approach to assessing patient outcomes. Reflective practice encompasses collecting patient outcome data, reflection on practice and review of feedback from peers, colleagues and co-workers. It

[48] ibid

[49] ibid

provides an opportunity to improve both practitioner and unit practice.[50] [51] [52]

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.[53] The main aim of clinical audit is to rigorously measure how well something is done and to provide feedback to improve local clinical care.[54]

Some studies have found that clinical audit with feedback is effective in changing physician care and patient outcomes.[55] [56] However, the practice of audit and feedback in healthcare professional practice has not consistently been found to be effective.

Ivers et al (2012) have conducted a large Cochrane systematic review[57] of 140 studies, to help explain the variability in performance changes and types of audit and feedback for health practitioners. 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.[58] [59] 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 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

[50] Hannan EL, Kilburn H, Racz M, et al. Improving the outcomes of coronary artery bypass surgery in New York State. JAMA 1994; 271: 761-766.

[51] Aylin P, Bottle A, Jarman B, Elliott P. Paediatric cardiac surgical mortality in England after Bristol: descriptive analysis of hospital episode statistics 1991-2002. BMJ 2004; 329: 825-827.

[52] O'Connor GT, Plume SK, Olmstead EM, et al. A regional intervention to improve the hospital mortality associated with coronary artery bypass graft surgery. The Northern New England Cardiovascular Disease Study Group. JAMA 1996; 275: 841-846.

[53] Dixon N. (1996), Good practice in clinical audit: a summary of selected literature to support criteria for clinical audit. London: National Centre for Clinical Audit.

[54] Middleton S. (2007), Audit or research. Should nurse practitioners participate in these types of evaluation and what is the difference between them? The Nurse Practitioner Series, 2(1): 26-32.

[55] Bluestone, J., et al., Effective in-service training design and delivery: evidence from an integrative literature review. Human Resources for Health, 2013. 11: p. 51.

[56] Bloom, B.S., Effects of continuing medical education on improving physician clinical care and patient health: a review of systematic reviews. International journal of technology assessment in health care, 2005. 21(03): p. 380-385.

[57] Ivers, N., Jamtvedt, G., Flottorp, S., Young, J. M., Odgaard-Jensen, J., French, S. D., O'Brien, M. A., Johansen, M., Grimshaw, J., & Oxman, A. D. (2012). Audit and feedback: effects on professional practice and healthcare outcomes (Review). Cochrane Database of Systematic Reviews, [6].

[58] Trebble, T., et al., Individual performance review in hospital practice: the development of a framework and evaluation of doctors' attitudes to its value and implementation. BMJ quality & safety, 2013. 22(11): p. 948-955

[59] Vahidi, R.G., et al., Organizational Facilitators and Barriers to Implementing Effective Clinical Audit: Systematic Review. 2012.

targeted to practice and practitioner needs, are manageable in scope, and are preferably accessed on a regular basis to determine the impact of change.

The most effective use of doctors' time would be in reflection and feedback on their data and relevant comparisons, rather than the time spent to collect it. This would seem to mandate the holders of large datasets, such as Medicare, to make more effective use of these existing data for CPD purposes to drive change.

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.[60]

A related discussion is the situation of doctors in non-clinical roles, who would not have access to patient outcome data.

Reviewing performance

Reviewing performance includes measures that examine medical practitioners' actual work processes with feedback. These include:

- direct observation by peers in the workplace
- peer review of medical records
- peer discussions of patient cases, critical incidents and safety and quality events, and
- MSF provided by colleagues, co-workers and patients

The role of feedback is critical in this process.

Peer review approaches to assessing the performance of doctors at work

Examples of approaches to assessing the performance of doctors at work using peer review have included peer review of medical records at the place of work with subsequent discussion, and peer observation of practice/consultations/procedures with feedback.

Medical record (chart) review and chart-stimulated discussions with peers 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.[61]

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 fifteen 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.[62]

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.[63] [64] 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.[65]

[60] Ivers, N., Jamtvedt, G., Flottorp, S., Young, J. M., Odgaard-Jensen, J., French, S. D., O'Brien, M. A., Johansen, M., Grimshaw, J., & Oxman, A. D. (2012). Audit and feedback: effects on professional practice and healthcare outcomes (Review). Cochrane Database of Systematic Reviews, 6.

[61] Goulet F, Jacques A, Gagnon R, Racette P, Sieber W. Assessment of family physicians' performance using patient charts: interrater reliability and concordance with chart-stimulated recall interview. Eval Health Prof. 2007 Dec;30(4):376-92.

[62] Gagnon R, Jacques A, Billard M, Goulet F. Determining the number of patient charts necessary for a reliable assessment of practicing family physicians' performance. Eval Health Prof. 2010 Mar;33(1):109-22.

[63] Runciman WB, Hunt TD, Hannaford NA, Hibbert PD, Westbrook JI, Coiera EW, Day RO, Hindmarsh DM, McGlynn EA , Braithwaite J. CareTrack: assessing the appropriateness of health care delivery in Australia. Med J Aust 2012; 197 (2): 100-105.

[64] Of 2416 duplicate reviews, 243 (10%) were discrepant. Four situations within three conditions gave rise to 98 (40%) of these discrepancies: disagreements about classification of the type of surgery (clean or contaminated), the timing of prophylactic antibiotics, or whether a patient was presenting with unstable or stable angina; and because some surveyors assumed a risk assessment had been carried out for patients appropriately receiving venous thromboembolism (VTE) prophylaxis, when there was no record of this.

[65] Thomas EJ, Lipsitz SR, Studdert DM, Brennan TA. The reliability of medical record review for estimating

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.[66] 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.[67] In the future, work on developing agreed clinical standards for index conditions, such as used in the CareTrack study (Runciman et al 2012 *op cit*), may provide explicit criteria to assist reviewers when assessing records.

Experience of peer review in Canadian regulatory authorities

Canadian regulatory authorities have significant experience in the peer review of medical records in the doctor's office as a CPD tool and as a method for early detection of performance issues. Two peer review approaches used by medical regulatory authorities in Canada are detailed later in this paper.

Multi-source feedback: assessing the performance of doctors at work

Multi-source feedback (MSF), also called '360-degree' appraisal, is a significant potential element of a strengthened CPD process (which is key to part one of this report). It has also been employed as a screening approach to help determine which doctors may not be performing to an acceptable standard (part two of this report). This section of the report describes and analyses the value and effectiveness of MSF in both these contexts.

MSF has been identified as a promising method for evaluating doctors' performance at work. For this purpose, MSF is based on surveys 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.[68]

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:

1. colleagues who know about the doctor's practice
2. co-workers (e.g. nurses, allied healthcare professionals or health-related administrative staff), and
3. patients.[69]

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.[70]

The surveys that are applied to each group vary in order to capture the most relevant information from each group. Figure 5 indicates the main attributes assessed by different MSF assessor groups.

adverse event rates. Ann Intern Med 2002; 136: 812-816.

[66] Lilford R, Edwards A, Girling A, Hofer T, Di Tanna GL, Petty J, Nicholl J. Inter-rater reliability of case-note audit: a systematic review. J Health Serv Res Policy. 2007 Jul;12(3):173-80.

[67] Smith MA, Atherly AJ, Kane RL, Pacala JT. Peer review of the quality of care. Reliability and sources of variability for outcome and process assessments. JAMA. 1997 Nov 19;278(19):1573-8.

[68] Handfield-Jones RS, Mann KV, Challis ME, Hobma SO, Klass DJ McManus IC, Paget NS, Parboosingh IJ, Wade WB, Wilkinson TJ. Linking assessment to learning: a new route to quality assurance in medical practice. Med Educ. 2002;36:949-958.

[69] Hall W, Violato C, Lewkonia R, Lockyer J, Fidler H, Toews J, Jennett P, Donoff M, Moores D Assessment of physician performance in Alberta: the physician achievement review. CMAJ. 1999 Jul 13; 161(1):52-7

[70] Campbell JL, Richards SH, Dickens A, Greco M, Narayanan A, Brearley S. Assessing the professional performance of UK doctors: an evaluation of the utility of the General Medical Council patient and colleague questionnaires.[Qual Saf Health Care. 2008].

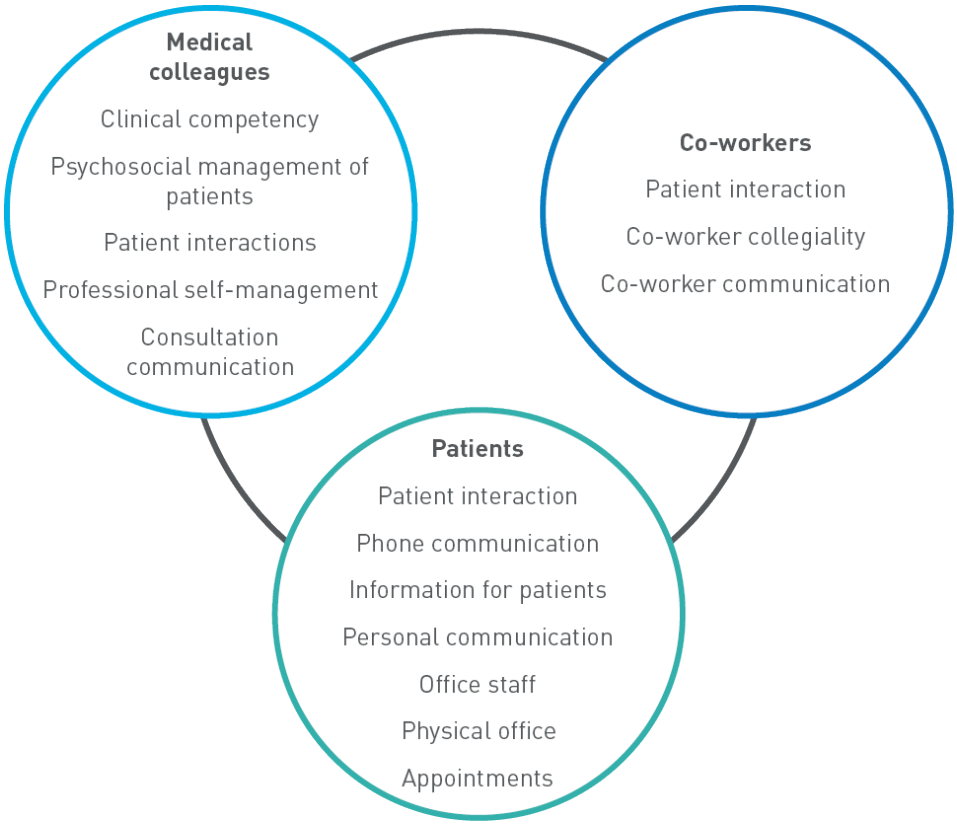

Figure 5: Attributes assessed by MSF assessor groups[71]

While self-directed learning is a central plank of CPD, Davis et al (2006),[72] 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. They proposed that the processes currently used to undertake CPD and evaluate competence may need to focus more on external assessment. Ferguson et al [73] in their systematic review of MSF, found that higher levels of behaviour change are achieved through facilitated feedback. 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.[74] The strongest effects have been found in studies where performance was evaluated and feedback given over longer periods of time.[75] 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. [76]

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.[77] Lockyer proposed that MSF is

[71] 360-degree physician performance review toolkit 2009. Council of Academic Hospitals of Ontario.

[72] Davis DA, Mazmanian PE, Fordis M, Van Harrison R, Thorpe KE, Perrier L. Accuracy of physician self-assessment compared with observed measures of competence: a systematic review. JAMA. 2006 Sep 6;296(9):1094-102.

[73] Ferguson, J., J. Wakeling, and P. Bowie, Factors influencing the effectiveness of multisource feedback in improving the professional practice of medical doctors: a systematic review. BMC medical education, 2014. 14(1): p. 76.

[74] Ferguson ibid

[75] J Veloski, JR Boex, MJ Grasberger et al. Systematic review of the literature on assessment, feedback and physicians' clinical performance BEME Guide no 7. Dundee, Association for Medical Education in Europe (2006).

[76] Mann, K., J. Gordon, and A. MacLeod, Reflection and reflective practice in health professions education: a systematic review. Advances in Health Sciences Education, 2009. 14(4): p. 595-621.

[77] Overeem K, Wollersheim HC, Arah OA, Cruijsberg JK, Grol RP, Lombarts KM. Evaluation of physicians' professional performance: an iterative development and validation study of multisource feedback instruments. BMC Health Serv Res. 2012 Mar 26;12:80.

not a replacement for audit when clinical outcomes need to be assessed. However, when interpersonal, communication, professionalism, or teamwork behaviors 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.[78] [79]

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).[80] [81] Slightly lower reliabilities were obtained from a similar study of anaesthetists.[82]

In the UK, Campbell et al (2008) 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.[83] 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 (ibid), 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).[84]

Therefore, 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.[85] [86] 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.[87]

Campbell's study (*op cit*), 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.

[78] Lockyer J. Multisource feedback in the assessment of physician competencies. J Contin Educ Health Prof. 2003 Winter;23(1):4-12.

[79] Dubinsky I, Jennings K, Greengarten M, Brans A. 360 degree physician performance assessment (2010) Health care Quarterly Vol 13 (2) 71-76.

[80] Lockyer JM, Violato C, Fidler H. The assessment of emergency physicians by a regulatory authority. Acad Emerg Med. 2006 Dec;13(12):1296-303. Epub 2006 Nov 10.

[81] Violato C, Lockyer JM, Fidler H. Assessment of psychiatrists in practice through multisource feedback. Can J Psychiatry. 2008 Aug;53(8):525-33.

[82] Lockyer JM, Violato C, Fidler H. A multi source feedback program for anesthesiologists. Can J Anaesth. 2006 Jan;53(1):33-9.

[83] Campbell JL, Roberts M, Wright C, Hill J, Greco M, Taylor M, Richards S. Factors associated with variability in the assessment of UK doctors' professionalism: an analysis of survey results. British Medical Journal 343:d6212.

[84] Overeem K, Wollersheim HC, Arah OA, Cruijsberg JK, Grol RP, Lombarts KM. Evaluation of physicians' professional performance: an iterative development and validation study of multisource feedback instruments. BMC Health Serv Res. 2012 Mar 26;12:80.

[85] Violato Claudio, Lockyer Jocelyn, Fidler Herta. Multisource feedback: a method of assessing surgical practice. BMJ. 2003 Mar 8;326(7388):546–548.

[86] Miller, A., Archer, J. Impact of workplace based assessment on doctors' education and performance; a systemic review. BMJ 2010;341:c5064

[87] Atwater, L. E., Brett, J. F., & Charles, A. C. (2007). Multisource feedback: Lessons learned and implications for practice. Human Resource Management, 46(2) 285-307.

It should be noted that in MSF differences have been found between responses according to respondents' background characteristics or context. Wilkinson et al,[88] 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. 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 (2012)[89], 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. 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.

Experience of MSF by Canadian regulatory authorities

The College of Physicians and Surgeons of Alberta (CPSA) originally developed and standardised the PAR – which was a MSF program for family physicians.[90]

Working with the Universities of Calgary and Alberta through a comprehensive consultative process involving physicians, patients and other healthcare professionals, and 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.

More recently, the CPSA has developed and implemented specialty-specific PAR programs for a wide range of specialties such as surgeons, pediatricians, anaesthetists and IMGs. Examples of the PAR tools are available on the College website.[91] Results from implementation of each set of PAR tools have been published in peer-reviewed journals.[92]

Participation in PAR has been mandatory for continued licensure in Alberta for over a decade – since 2001. The process requires physicians to participate in the performance review process every five years. The process primarily focuses on practice quality and educational processes rather than a search for underperformance. PAR involves 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,[93] [94] although some authors have suggested that 25 patients may be insufficient. PAR covers five physician attributes:

1. clinical knowledge and skills
2. communication skills
3. psychosocial management
4. office management, and
5. collegiality.

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

Alberta's PAR program is an integral component of the Alberta College's revalidation strategy. Although it is primarily a quality-improvement program, 20 per cent of physicians undergoing

[88] Wilkinson JR, Crossley JG, Wragg A, Mills P, Cowan G, Wade W. Implementing workplace-based assessment across the medical specialties in the United Kingdom. Med Educ. 2008 Apr;42(4):364-73.

[89] Wright C, Richards SH, Hill JJ, Roberts MJ, Norman GR, Greco M, Taylor MRS, Campbell JL. Multisource Feedback in Evaluating the Performance of Doctors: The Example of the UK General Medical Council Patient and Colleague Questionnaires. Acad Med. 2012;87:1668–1678.

[90] Violato C, Marini A., Toews J, Lockyer J., Fidler H. Feasibility and psychometric properties of using peers, consulting physicians, co-workers, and patients to assess physicians. Acad Med. 1997;72 (10):S82- S84

[91] College of Physicians and Surgeons of Alberta. Physician Achievement Review Program. Available from URL: http://www.par-program.org. Accessed 1 July 2012

[92] Lockyer J, Violato C, Fidler H. What multi source feedback factors influence physician self assessments? A five-year longitudinal study. Acad Med2007;82(10 Suppl):S77-80

[93] Donnon, T., et al., The reliability, validity, and feasibility of Multisource Feedback Physician Assessment: A systematic Review. Academic Medicine, 2014. 89(3): p. 511-516

[94] Khalifa, K.A., et al., Multisource Feedback to assess surgical practice: a systematic review. Journal of Surgical Education, 2013. 70(4): p. 475-486

this review will be flagged for follow-up, and one out of five of those (about four per cent of the total) will then undergo a formal peer review of their practice.[95]

This peer review may include a practice visit, with direct observation and medical record (chart) review and a process of 'Chart Stimulated Recall', which is a discussion based on the doctor's own cases. One doctor only visits the practice. A specialist familiar with the physician's type of practice conducts visits for surgeons, medical specialists and anaesthetists.

If the review raises concerns about underperformance, the doctor may then be required to undertake a more detailed assessment of clinical knowledge and skills. This detailed assessment may include but is not limited to assessments of professional knowledge and skills, communication skills, mental and physical health, professional ethics and practice management.[96]

The PAR process therefore has been specifically regulated so that it does not lead directly to disciplinary action or investigation without the involvement of the doctor concerned through processes for further scrutiny. The CPSA view is that it does have an obligation to recognise serious concerns, or performance problems, and treats the process as remediation of individual needs as a supportive model. While primarily focussed on feedback to the majority for performance improvement and reflection, it is also clear that it is intended to identify a small group of potentially underperforming doctors for further scrutiny.

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. Nova Scotia PAR (NSPAR) was launched in 2005.

As an example, in the NSPAR MSF program participants identify eight medical colleague and eight co-worker reviewers, and randomly select 25 patient reviewers. Physicians receive an orientation to the program and all reviewers receive brief written guidance for completing their questionnaires, but formal training in using the questionnaires is not provided. Reviewers rate physicians on multiple questionnaire items using a five-point Likert scale and an 'unable to assess' option.

Figure 6 shows the five attributes that are covered in NSPAR. The full NSPAR survey can be downloaded from the CPSNS website.[97]

[95] Theman T, Oetter, HM, Kendel, DA. Revalidation of Canadian physicians. CMAJ. 2009 March 3; 180(5): 539

[96] www.par-program.org/information/participation-rules.html accessed 28 June 2012.

[97] www.nspar.ca/samplesurveys/general.html accessed 13 July 2012.

Figure 6: NSPAR Attribute Descriptions

Participating physicians complete a self-assessment questionnaire using the same items as the medical colleague questionnaire. Of 40 items on the patient questionnaire, just over half address physician-patient communication and information sharing, and the remainder, practice management and professionalism issues. For the medical colleague questionnaire, the 31 items are divided more or less equally among the patient communication, clinical competence, co-worker and colleague communication, and professional self-management domains. Of the 17 items on the co-worker questionnaire, eight address communication with patients and nine collegiality and co-worker and colleague communication.

Physicians underwrite the costs of PAR, which are built into their annual re-licensure fee. The College estimates that administrative costs work out to $40 CAD a year per physician.

There are four versions of NSPAR currently applied to physicians in Nova Scotia – a family physician version, versions for medical specialists and for surgeons, and a version for paediatric specialists. Like the Alberta experience, each version uses surveys that have now been designed and modified to suit the unique needs of each of the four categories of physicians. Certain practice areas are presently not eligible for NSPAR review. These include psychiatry, anesthesiology, radiology, laboratory medicine and episodic care. However it is stated that the program will expand to include these areas in the near future.[98]

The main point of difference between PAR and NSPAR is that NSPAR is not connected to detecting possible underperformance. Indeed, great care is taken to ensure physician anonymity is protected during this process. Only in rare instances could a physician be referred to the Registrar of the College through the NSPAR process. This would only occur if the review determined that the public was at immediate risk of harm; if there were a serious breach of ethics identified during the review; or if there were an unreasonable failure to comply with the requirements of the NSPAR process. Under the Nova Scotia *Medical Act*, NSPAR review results and reports are protected from use or disclosure in any disciplinary process or legal proceeding.

[98] www.nspar.ca/samplesurveys/index.html *accessed 28 June 2012*

The PAR MSF process is spreading in Canada. 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 will be required to participate in – i.e. make themselves available for – the Manitoba PAR (MPAR) process once every seven years. Once selected, physicians must, by law, complete the MPAR assessment. Each year, approximately 14 percent of Manitoba physicians will be surveyed.[99] It is anticipated that approximately 10 percent 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.

In British Columbia, a long-standing program known as the Physician Practice Enhancement Program (PPEP) now incorporates both peer review of medical records and MSF using the PAR tool. All community-based physicians in British Columbia will now participate in periodic assessments. Physicians working in an unsupported or isolated environment, as well as physicians over the age of 70 years, are prioritized 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 at any time every one to ten years. On average, a seven- to eight-year cycle is anticipated. Physicians aged 70 or above, however, are automatically assessed on a three-year assessment cycle. All information collected through the PPEP is confidential, protected, and will only be 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.

Similarly, recently the Council of Academic Hospitals of Ontario (CAHO) has aimed to have all its member hospitals using MSF for all medical staff. The results are not used for credentialing or re-appointment purposes. Using the PAR instruments, surveys are administered and collated. Feedback, professional development and coaching is provided confidentially by the department head. The individual doctor sees their own results compared with de-identified peers, and a threshold score.[100]

Effective 1 January 2016, the Medical Council of Canada (MCC) is leading the research and development of the PAR survey instruments

Online learning

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 (2010)[101] conducted an important randomised controlled study of the effectiveness of 114 online CPD activities in US doctors. 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

[99] *www*.mpar.ca/welcome/faq accessed *11 July 2012*

[100] www.nhlc-cnls.ca/assets/33_The%20PQII%20Panel%20Section%201%20to%204.pdf

[101] Casebeer L et al. Evidence-based choices of physicians: a comparative analysis of physicians participating in Internet CME and non-participants. BMC Medical Education 2010 10:42.

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 the recent meta-analysis by Cook et al. (2008)[102], 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.

Strengthening continual professional development: increasing efficiency and effectiveness

A snapshot of the profession

Australia's 100,000-plus medical practitioners can be clustered into five broad groups in relation to CPD.

The groups are medical practitioners with:

a. specialist registration who participate in structured college CPD programs

b. general registration who participate in a relevant structured college CPD program

c. specialist registration who undertake self-directed CPD activities that meet college requirements

d. general registration who undertake self-directed CPD activities, and

e. limited, provisional or general registration, who are under supervision, in supervised practice or training programs.

The EAG does not have information about the actual distribution of practitioners within these groups. Current registration data indicate a significant proportion (around 55%) of medical practitioners hold specialist registration and are therefore required to meet the requirements of a specialist medical college CPD program. The EAG would like to seek more information about the actual distribution, through discussion with stakeholders.

Under current Australian regulatory requirements, all individuals in 'group e', i.e. those in training or under supervision, will progress to one of categories a – d over a fixed period.

The EAG believes that the structured training and supervision in place for 'group e' is adequate to protect patients, monitor and as needed address the performance of individual practitioners. This interim report therefore focuses on options to strengthen CPD requirements for practitioners in groups a – d, to improve public safety in healthcare.

Strengthened CPD

Strengthened CPD, developed in consultation with the profession and the community, is a recommended pillar for revalidation in Australia.

CPD, when conducted according to the evidence, is an important driver of practice improvement and better patient healthcare outcomes. Evidence-based activities are already in use in different Australian healthcare settings and in medical 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.

CPD is continuing to evolve. We now have the opportunity to strengthen Australia's CPD system for medical practitioners so it is effective, flexible and dynamic. Evidence-based and principles-based approaches will best drive practice improvement and better patient healthcare outcomes, and meet future needs. Given the distribution of registered medical practitioners within and outside Specialist Colleges, all proposed changes to strengthen CPD must apply and be accessible to all registered medical practitioners.

Although the precise nature of CPD requirements varies between the colleges, common components include those that are supported by the evidence discussed above – such as feedback from peer interactions and use of patient outcome data, as well as interactive events with reflective elements. Many colleges have continued to actively innovate their CPD programs.

Profession-led collaboration between colleges about the way forward in Australian CPD would enable sharing of best practice, and could lead to collaborative piloting of interventions and 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 early, to support collaborative development and maintain focus on the intended outcomes. It will also promote a focused and

[102] Cook DA, Levinson AJ, Garside S, Dupras DM, Erwin PJ, Montori VM: Internet-based learning in the health professions: a meta-analysis. JAMA. 2008, 300: 1181-1196.

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 patient outcomes will improve throughout their careers. As doctors' careers progress, and their scope of practice alters as a result, learning needs will change and so will the activities required for different scopes of practice.

To achieve this, and adapting the Klass model, the EAG is proposing to strengthen CPD by:

1. Applying a set of guiding principles to shape all CPD for medical practitioners in Australia. The guiding principles proposed for high quality CPD programs are:
    a. are evidence-based
    b. are relevant to the doctor's practice setting(s) and scope
    c. focus on outcomes that individual doctors wish to attain and which support their individual practice
    d. aim to improve doctors' performance and behaviours as well as their patient outcomes
    e. emphasise the role of self-reflection
    f. provide credible and practical feedback
    g. provide programs that are interactive, use multiple methods and involve multiple exposures
    h. are led by the profession
    i. are integrated with existing performance-management and credentialing systems to avoid duplication, and
    j. encourage collaboration within the profession
2. Ensuring medical practitioners participate in three core types of CPD, with activities prioritised to strengthen individual performance. All recognised CPD activities would be evidence-based and support performance review, outcome measurement and educational activities.

Given the quality of the evidence now available, it is also reasonable for regulatory standards to strengthen requirements for CPD that is evidence-based and has been shown to promote the desired outcome.

The evidence demonstrates that greatest weighting should be given to focusing CPD requirements on:

- providing educational activities according to the best evidence
- improving all aspects of professional performance and patient 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.

Evidence-based approaches to CPD best drive practice improvement and better patient healthcare outcomes. Strengthened CPD, developed in consultation with the profession and the community, is a recommended pillar for revalidation in Australia.

Analysis

Strengthened CPD builds on what has already been achieved in current Australian CPD programs that are relevant to the individual practitioner's scope of practice. It does not involve developing and implementing fundamentally new or redesigned processes.

Moving towards strengthened CPD

Evolution, not revolution, is at the heart of this proposal. A collaborative approach, in which stakeholders interested in different aspects of CPD work together systematically towards common goals, could accelerate the progress towards quality CPD programs for all doctors and enhance innovation.

This will require colleges and relevant stakeholders to work together and:

- identify areas of strength and leadership in improving outcomes for patients, doctors and the wider community
- work collaboratively to identify areas of efficiency and effectiveness in current activities
- increase consistency where relevant, and
- create economies of scale.

Most clinicians are time-pressured and must be able to balance the demands of patient care and CPD. It is vital, however, that all clinicians undertake better, not more, CPD to improve both their performance and clinical outcomes. Individual medical practitioners will remain

financially responsible for their CPD activities. It is therefore important that CPD developments are well-designed to stay as far as possible within the cost and time structures that are currently in place.

It is essential that the specialist colleges and other providers ensure that the CPD they approve demonstrates clearly that it is aimed at improving performance in practice and patient outcomes for each individual doctor.

Equally, the self-directed programs that individual doctors undertake must be of a comparable quality to college programs. A related imperative is clarifying and strengthening the role of colleges when members do not complete or only partly complete CPD requirements. Ideally any processes concerning non-completion would be harmonized with MCNZ requirements for the majority of colleges as they are bi-national. This issue needs discussion.

The EAG recognises that Australia may take a number of years to implement a fully evidence-based approach to CPD. It will require a phase-in period of consultation and strong collaboration between the Board, medical colleges/learned societies and professional associations, government, employers, indemnity insurers, other educational providers, practitioner groups, evaluators, researchers and consumers.

Ensuring effectiveness

The EAG proposes a greater focus on developing and ensuring the effectiveness of CPD activities to improve practitioner performance and patient outcomes.

There is a continuing need to investigate relationships between CPD activities and their impact on doctors' performance and patients' healthcare outcomes. High quality research and/or evaluation must occur in the Australian context.

Stakeholder involvement in developing and piloting new initiatives is critical to their success, particularly those that further develop or change current approaches to CPD. Also, any new initiatives must be carefully evaluated for their desired impact, acceptability to the profession and consumers, feasibility and cost/benefit.

Availability of data

Currently, there are significant gaps in the ready availability of data to support individual clinicians' audit activities in different specialties. Australian doctors need better access to high-quality data. Active engagement with the holders of potential practice-based and 'mega-data' sources (such as Medicare, health departments and hospitals) are necessary to enable doctors to receive individual and comparative data that will support more effective and efficient reflection on their performance and outcomes.

Medical practitioners without specialist registration

Maintaining the current tiered system of CPD requirements according to registration type underpins the EAG's approach to strengthening CPD. Doctors with specialist registration are required to undertake CPD programs of (or equivalent to) the specialist colleges. Doctors with limited, provisional or general registration fall into two categories:

1. doctors with either limited, provisional or general registration, who are in supervised practice or training programs. The EAG believes that the structured training or supervision in place for this group is adequate to protect patients and improve the performance of individual practitioners.
2. doctors holding general registration who undertake self-directed CPD programs. It is critical to ensure that these doctors are engaging in a well-defined range of activities that that have been demonstrated to improve performance and outcomes.

Specific evidence-based activities, as well as the duration of engagement, are important in framing registration standards. Therefore, consideration should be given to evolving minimum standards to include both performance review and outcomes-based activities.

The role of healthcare consumers

It is essential that the public understands how a doctor's CPD works to improve health care. Consumers should be well informed about how doctors may use their feedback and de-identified healthcare outcomes to improve the quality of their care. Consumers should be able to contribute actively to developments in and evaluation of CPD approaches.

Work with employers

While individual medical practitioners are responsible for meeting regulatory standards for CPD, employers have a clinical governance responsibility to invest in supporting quality CPD in their environment for the doctors they employ. Employers are valuable stakeholders in enabling peer-review processes and in providing data-rich environments that support the assessment of performance and improvement of patient outcomes.

Part one recommendations

Strengthened continuing professional development

The EAG recommends a strengthened system of CPD that is robust, evidence-based, flexible to meet future needs and is clearly linked to patient safety and improved performance:

1. **CPD is strengthened by applying a set of guiding principles to shape all CPD for medical practitioners in Australia. These guiding principles are:**

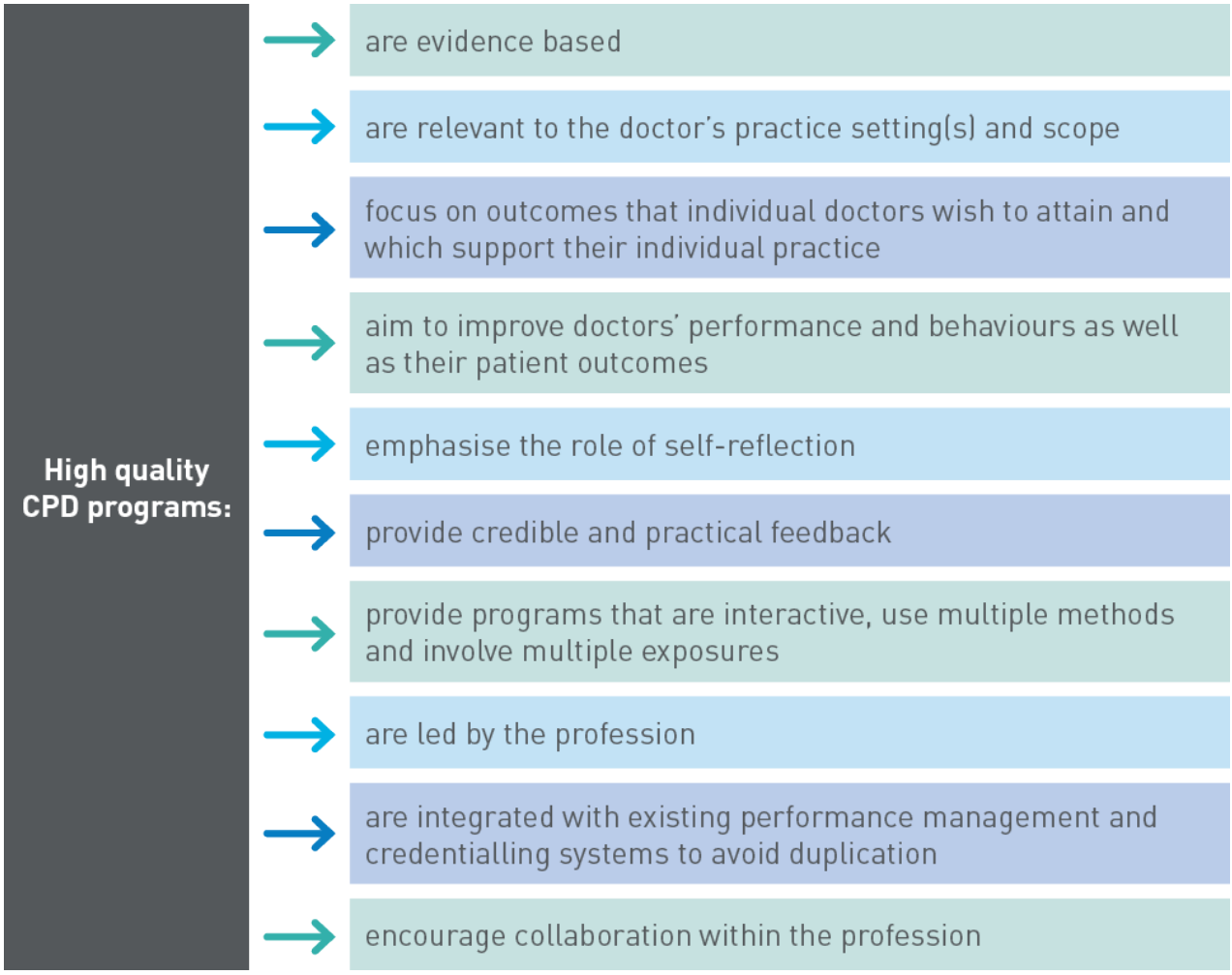

Figure 1 (repeated): Guiding principles for CPD

2. **Ensuring medical practitioners in clinical practice participate in three core types of CPD, with activities prioritised to strengthen individual performance. All recognised CPD activities would be evidence-based and involve performance review, patient outcome measurement and validated educational activities. CPD would be broadly based, to improve all aspects of practice.**

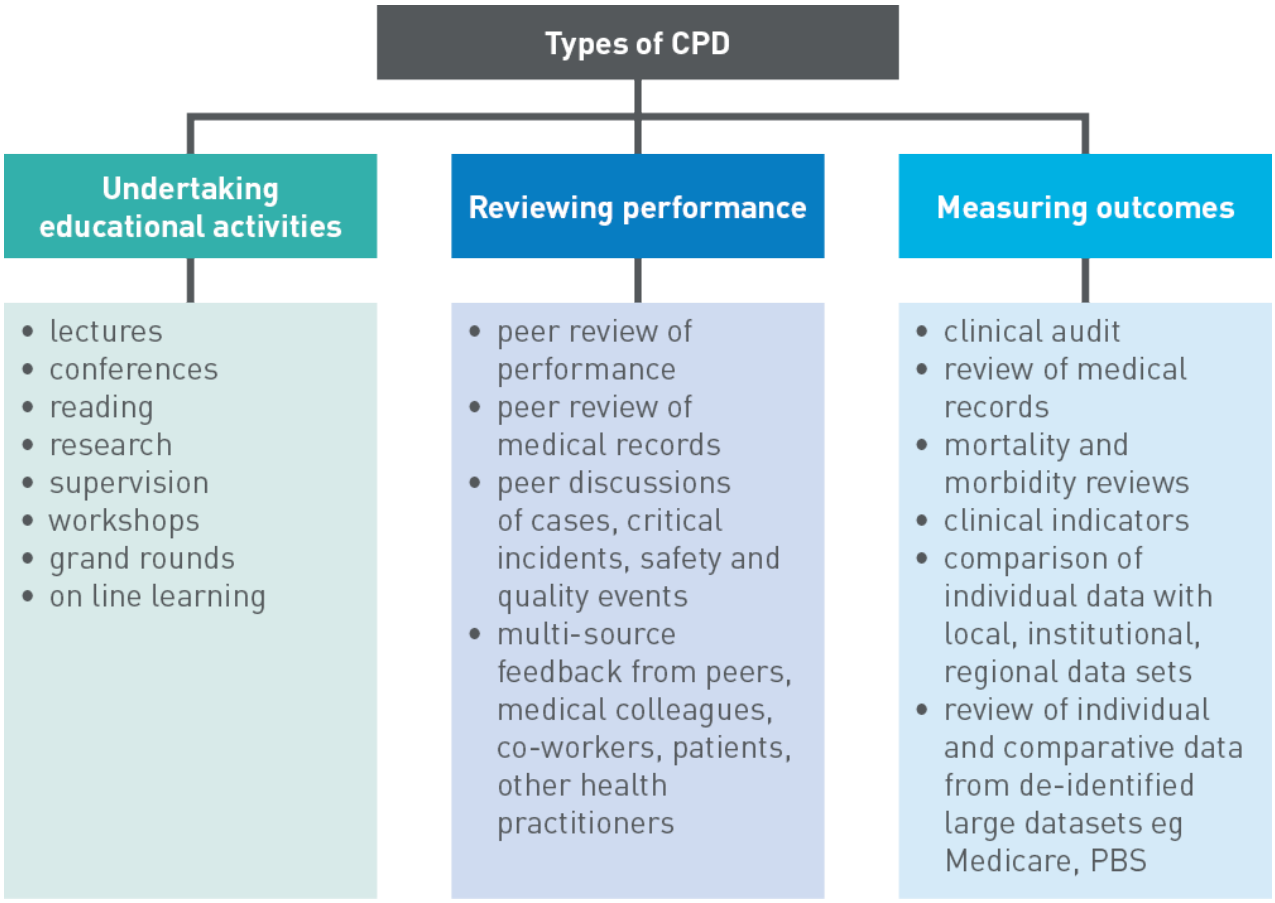

Figure 2 (repeated): Types of CPD

Part two:
Proactive identification and assessment of 'at risk' practitioners

Background

The main agencies in Australia with responsibility for medico-legal matters are the civil courts (negligence claims), the health complaints entities (HCEs) in each state and territory (patient complaints), and the Medical Board of Australia (conduct, health and performance matters). Similarly, in New Zealand the Health and Disability Commissioner is a national New Zealand crown entity responsible for promoting and protecting the rights of health and disability consumers. The MCNZ has similar jurisdiction to the Board. In addition, the Australian coronial court is an inquisitorial court related to investigation of certain deaths and contribution to reducing public risk under the *Coroners Act 2008*.[103]

Table 1 (adapted from Bismark et al 2013)[104] demonstrates the relationship and remit of these agencies.

103

www.coronerscourt.vic.gov.au/find/legislation/coroners+act+2008

104

www.qualitysafety.bmj.com/content/22/7/532.full.pdf+html

Table 1: Jurisdiction and functions of key agencies with responsibility for medico-legal matters in Australia

	Civil courts	Health complaints entities (commissions)	Health practitioner regulators[105]
Cases handled	• negligence claims	• patient complaints	• conduct, competence, or health matters
Jurisdictional focus	• substandard care causing patient harm	• low-quality care • patient dissatisfaction with care	• professional misconduct • performance or competence falling below professional standards • ill health, substance misuse or impairment
Procedures used	• out of court negotiation • alternative forms of dispute resolution (e.g. mediation, arbitration) • trials before judges	• early resolution • conciliation • investigation	• review of doctor's competence or health status • investigation • disciplinary charges
Remedies	• monetary damages	• communication (e.g. facilitate apology or explanation • restoration (e.g. facilitate provision of further treatment, fee forgiveness, monetary settlement) • correction (e.g. recommend system change)	• no further action required • correction (e.g. requirement that practitioner undergo education, rehabilitation, monitoring, etc.) • sanction (e.g. suspension or revocation of registration* *typically, such sanctions are imposed by external administrative tribunals in proceedings initiated by the Medical Board of Australia

[105] Includes the Medical Board of Australia, the Medical Council of New South Wales and the Queensland Office of the Health Ombudsman

HCEs aim to provide readily accessible healthcare complaints and reporting systems. They provide an important avenue for consumers to voice opinions on the quality of their health care.

Australia and other similar countries also use health practitioner regulation to ensure that every doctor is fit to practise. *Good Medical Practice: A code of conduct for doctors in Australia* (the code) describes what is expected of all doctors registered to practise medicine in Australia. It sets out the principles that characterise good medical practice and makes explicit the standards of ethical and professional conduct expected of doctors by and towards their professional peers and the community.[106]

One of the ways in which the Board protects the community is by investigating notifications made by the public and employers, and, when necessary, subsequently managing medical practitioners when:

- they have been found to have engaged in unprofessional conduct or professional misconduct, or
- they have been found to have engaged in unsatisfactory professional performance, or
- their health is impaired and their practice may place the public at risk.[107]

The word 'notification' is deliberate and reflects that the Board is not a complaints resolution agency. It is a protective jurisdiction and its role is to protect the public by dealing with medical practitioners who may be putting the public at risk as a result of their conduct, professional performance or health.

In addition to these formal channels, a significant proportion of Australian doctors practise in hospitals. They may be employees of health services either full-time or part-time, or employed as visiting medical specialists in the public sector, or have admitting rights in the private sector as visiting medical specialists. Although conditions of employment or engagement may vary for medical staff in different health services and different jurisdictions, these medical staff are subject to health service policies and/or by-laws which determine both clinical and non-clinical behaviours.

Complaints or concerns about medical staff in health services are not uncommon and are related to both clinical and non-clinical activities. Non-clinical activities are those which do not necessarily relate to direct patient care but do have an effect on patient care, including issues with communication, collaboration, management and professional behaviours. These concerns or complaints may be made by patients or their families, by other clinicians or by other staff in the health service or occasionally by external clinicians. Generally such concerns or complaints will come to the attention of health service staff.

Complaints or concerns may be made to other clinical staff, to administrative staff, to clinician managers who run units or departments or to hospital executive staff such as the Director of Medical Services (DMS) (or equivalent) or the Chief Executive Officer (CEO) of the health service. Depending on the seriousness of the concern or complaint, these may be dealt with in the clinical environment or may be escalated to a senior executive in the organisation. Most commonly, serious concerns or complaints are managed by the Head of Department or by the DMS or by both in collaboration.

Often these concerns or complaints are isolated complaints relating to a single episode of poor behaviour, lack of accountability, a single clinical care adverse event or poor communication. However there are occasions when a pattern of behaviour is detected and this will be fully investigated at health-service level and a decision made as to what action needs to be taken. There will be times when the hospital needs to refer this to the regulator, often when the events have serious patient consequences. However, more commonly the health service will work with the doctor to develop a process of remediation and will evaluate the outcome of the remediation. This will be a controlled process and there will be no notification of the regulator unless there is a failure of remediation. This is the preferred route, i.e. identifying and remediating early and locally. There are not yet commonly agreed thresholds for referral to regulators.

There are also some instances when the pattern of behaviour is such that the health service negotiates with the doctor to leave the health service and this often becomes a legal negotiation process, or when the doctor's employment may be terminated if the issues are serious enough. Depending on the circumstances, a referral to the regulator may or may not be made as the concerns may be specific to the particular environment and the doctor will continue to work at other health services. An example of this may be when the doctor is unable to collaborate effectively with the rest of the team or the doctor has specifically

[106] www.medicalboard.gov.au/Codes-Guidelines-Policies/Code-of-conduct

[107] www.medicalboard.gov.au/Notifications

been asked to follow a hospital policy and has not abided by this.

However, when there is a pattern of such behavior it could point to a doctor at risk of poor performance that will directly affect patient safety in the future.

Many doctors working in hospitals function as part of a multi-disciplinary team, delivering care to patients. Increasingly the outcomes for patients are being captured and analysed within Clinical Quality Registries, or via clinical audits. These registries and audits allow comparison of patient outcomes using risk-adjusted measures, which may highlight both good and poor performance of both the team and individual doctors. The hospital management plays a vital role in monitoring the results of these quality-improvement activities and has the responsibility to intervene when patient outcomes are inappropriate. Here the analysis of potential underperformance of an individual doctor within a team is less clear.

Nonetheless, at present there is no way to systematically identify such doctors in the health system overall or to determine the levels of risk that is associated with any poor performance.

Studies of the at-risk population from regulators, researchers and evaluators

Size of the problem

International evidence shows that a small proportion of doctors may not be practising to a sufficient standard at any one time. In a 1994 study from the UK, Donaldson estimated that over a five-year period, as many as six per cent of doctors could raise concerns serious enough to warrant consideration of disciplinary action.[108] The study investigated the medical staff of a large National Health Service (NHS) hospital workforce covering a population of three million. Over a five-year period, serious potentially disciplinary-related concerns were raised in 49 out of 850 consultant staff. Ninety-six types of problem were encountered, and were categorised as poor attitude and disruptive or irresponsible behaviour (32), lack of commitment to duties (21), poor skills and inadequate knowledge (19), dishonesty (11), sexual matters (seven), disorganised practice and poor communication with colleagues (five), and other problems (one). Twenty-five of the 49 doctors retired or left the employer's service, whereas 21 remained in employment after counselling or under supervision.

[108] Donaldson LJ. Doctors with problems in an NHS workforce. BMJ 1994;308:1277–82.

The United States Federation of State Medical Boards (FSMB) defines two areas of concern in practice. The first is when a doctor fails to maintain acceptable standards in one or more areas of their professional practice and the second is when a doctor is completely lacking the requisite abilities and qualities (cognitive, non-cognitive, and communicative) to perform effectively in the expected scope of their professional practice.[109] Williams recently estimated a six to 12 per cent rate of the former among US physicians.[110] He suggests that these percentages, while a small minority of the medical population, nonetheless constitute a sufficiently large group to give cause for alarm and to energise efforts to detect and, where possible, remediate deficiencies. Regarding cognitive functioning, Kataria et al (2014)[111] examined the performance assessments and cognitive function in109 practitioners over the age of 45 years referred to the National Clinical Assessment Service (NCAS) between 1 September 2008 and 30 June 2012.

The majority of reasons for referral included 'clinical difficulties' and 'governance or safety issues'. Eighty-seven practitioners scored above 88 on ACE-R (a cognitive screening test). Twenty-two were found to have an ACE-R score of <88, indicating a potential cognitive issue. On further assessment, 14 of these 22 practitioners were found to have cognitive impairment. The majority of all practitioners were found to be performing below the expected level of practice for someone at their grade and specialty and the youngest doctor with a cognitive deficit was 46 years old. Many were working in isolation. The authors stated:

> *Our findings highlight the need for increased vigilance … to recognise performance problems and emphasise the importance of a comprehensive assessment (where underperformance is an issue)* (p.1).

[109] Federation of State Medical Boards. Essentials of a Modern Medical Practice Act. Available at: www.fsmb.org/pdf/GPROL_essentials_eleventh_edition.pdf.

[110] Williams BW. The prevalence and special educational requirements of dyscompetent physicians. J Contin Educ Health Prof. 2006;26:173-191.

[111] Kataria N, Brown N, McAvoy P, Majeed A & Rhodes M. (2014) A retrospective study of cognitive function in doctors and dentists with suspected performance problems: an unsuspected but significant concern. Journal of the Royal Society of Medicine Open; 5(5) 1–9.

Assessing doctors' performance comprehensively is therefore required to identify those whose performance consistently falters, or fails to meet expected standards of care.[112]

In the current multi-level evaluation study of the UK revalidation system interim report (2016),[113] the annual appraisal system that is now in place for the majority of UK doctors was evaluated. Surveys were distributed to 156,610 doctors, including appraisers.[114] In all, 26,171 responded, of whom 4,454 respondents were also appraisers. Ten per cent of responding appraisers (n=412) had escalated a concern about at least one of their appraisees. Concerns were most frequently raised about the doctors' lack of reflective practice (45.5 per cent).

Khalik et al (2005)[115] studied disciplinary regulatory action involving Oklahoma doctors. Among 14,314 currently or previously licensed physicians, 396 (2.8 per cent) had been disciplined. Using univariate proportional hazards analysis, men were found to be at greater risk of being disciplined than women. Kaplan-Meier analysis revealed an age effect in that the proportion of physicians disciplined increased with each successive 10-year interval since first licensure. Complaints against physicians most frequently involved issues related to quality of care (25 per cent), medication/prescription violations (19 per cent), incompetence (18 per cent), and negligence (17 per cent).

In 2014, the UK GMC reported that doctors with previous complaints are at greater risk of future complaints – that is, doctors who received two or more complaints during 2007–2012 were seven times more likely to receive a complaint that required investigation in 2013.[116] In addition, the relative proportions of doctors at higher risk of being complained about, being investigated or receiving a sanction or a warning showed that the highest risks arose for:

- male doctors overall
- male doctors over 50 years old who are non-UK graduates, and
- male GPs aged 30–50 years who are non-UK graduates (p.108).

Donaldson et al (2014)[117] conducted a large observational study using data collected by the independent NCAS[118] in the UK for each referral for performance concerns (n=6179 doctors) over an 11-year period (2001–2012). The annual referral rate was five per 1,000 doctors. Referrals usually came from NHS managers. Key findings included:

- doctors whose first medical qualification was gained outside the UK were more than twice as likely to be referred as UK-qualified doctors
- male doctors were more than twice as likely to be referred as women doctors, and
- doctors in the later stages of their career were nearly six times as likely to be referred as early-career doctors.

In Denmark, a recent study of complaints against GPs to the Danish Patient Complaints Board in 2007 has identified that for complaints about

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[112] Leape L, Fromson JA. Problem doctors: is there a system-level solution? Ann Intern Med 144, 2006, pp. 107–115.

[113] UMbRELLA, Revalidation system interim report 2016, available at www.gmc-uk.org/doctors/revalidation.9610

[114] Appraisers are peers who conduct a mandatory formal annual performance appraisal interview and make recommendations regarding fitness to practise based on the interview and the required evidence provided by the doctor.

[115] Khaliq, Amir A. et al. (2005) Disciplinary action against physicians: Who is likely to get disciplined? The American Journal of Medicine , Volume 118 , Issue 7 , 773 - 777

[116] The state of medical education and practice in the UK report: 2014. Chapter 2 Developing our understanding of risk. www.gmcuk.org/Chapter_2_25112014.pdf_58752936.pdf

[117] Donaldson LJ, Panesar SS, McAvoy PA, et al. Identification of poor performance in a national medical workforce over 11 years: an observational study. BMJ Qual Saf 2014;23: 147–152

[118] The UK's National Clinical Assessment Service (NCAS) was set up in 2001 and helps improve patient safety by working with the National Health Service (NHS) and other healthcare organisations to resolve concerns about the professional practice of doctors, dentists and pharmacists. NCAS provides a range of services – from telephone advice, through to more detailed and ongoing support, to a full assessment of the practitioner's performance. This consists of a workplace-based assessment, which includes a health assessment by a specialist in occupational medicine, a behavioural assessment by an occupational psychologist and an assessment of clinical practice. The components of the clinical assessment include a record review, observation of clinical practice, case-based assessment, site visit, and peer and patient feedback. Services are tailored to the specific case and may include specialised interventions including remediation.

daytime services, the professional seniority of the general practitioner was also positively associated with the odds of receiving a complaint decision (OR = 1.44 per 20 years of seniority; CI 95 per cent, 1.04–1.98). Likewise, having more consultations per day was associated with increased odds (OR = 1.29 per 10 extra consultations per day; CI 95 per cent, 1.07–1.54).[119]

Regarding gender associations, as had been flagged in a number of previous studies, Unwin et al (2014)[120] conducted a large, specific UK-wide study to examine the association between doctors' gender and receiving sanctions on their medical registration, while controlling for other potentially confounding variables. All doctors on the GMC medical register on 29 May 2013 were included if they were or had been registered to practise medicine in the UK since October 2005.

The variable of interest was doctors' gender. Confounding variables included the number of years since primary medical qualification, world region of primary medical qualification and specialty. The outcome measures comprised sanctions on a doctor's medical registration (including warnings, undertakings, conditions, suspension or erasure from the register). Binary logistic regression modeling, controlling for confounders, described the association between the doctor's gender and sanctions on a doctor's medical registration.

Of the 329,542 doctors on the medical register, 2,697 (0.8 per cent) had sanctions on their registration, 516 (19.1 per cent) of whom were female. In the fully adjusted model, female doctors had nearly a third of the odds (OR: 0.37, 95 per cent CI: 0.33 to 0.41) of having sanctions compared to male doctors. There was evidence that the association varies with specialty, with female doctors who had specialised as general practitioners being the least likely to receive sanctions compared with their male colleagues (OR: 0.26, 95 per cent CI: 0.22 to 0.31).

Proactive screening for underperformance by regulators

Some international regulatory bodies have also sought to determine proactively whether doctors are underperforming. In Ontario, the College of Physicians and Surgeons (CPSO) randomly selects members each year to undergo a program called 'peer assessment'.[121] Physicians who have been in independent practice for at least five years and who are under the age of 70 are eligible for random selection.

Once a physician turns 70 years old, they will be selected for mandatory peer assessment (if the physician has not been randomly selected in the previous five years). These physicians are then re-assessed every five years thereafter.

Assessors are peers carefully selected to match the assessed physician's practice. They conduct a review of the doctor's medical records, at which time the doctor need not be present. This is followed by a formal interview and discussion of the record review. The process takes a half-day and is currently under review in a process being called 'assessment revisioning'. More emphasis on self-evaluation and testing the usefulness of adding a multi-source feedback component to the peer-assessment program is being considered.

The peer-assessment program has been operational since 1980 and thousands of physicians have been assessed. Each year, most physicians (almost 90 per cent) are found to be practising in a satisfactory manner and receive useful feedback from their assessor, a practising colleague. About 10 per cent of doctors each year are referred for further investigation as a result of the peer review of records. If problems are identified, further activities may be undertaken including direct observation of consultations to elucidate the risk issues. Despite the mandatory nature of peer review once selected, surveys have indicated that about 80 per cent of doctors find the process educational.

In Quebec, a professional inspection visit (PIV) comprises a peer-assessment of the quality of a doctor's practice.[122]

Professional inspection is an obligation stipulated in the Collège des Médecins du Québec Professional Code, the law governing all

[119] Søren Birkeland, Rene dePont Christensen, Niels Damsbo, and Jakob Kragstrup, "Patient Complaint Cases in Primary Health Care: What Are the Characteristics of General Practitioners Involved?," BioMed Research International, vol. 2013, Article ID 807204.

[120] Unwin E, Woolf K, Wadlow C, et al. Disciplined doctors: Does the sex of a doctor matter? A cross-sectional study examining the association between a doctor's sex and receiving sanctions against their medical registration. BMJ Open 2014;4

[121] www.cpso.on.ca/CPSO-Members/Peer-Assessment

[122] www.cmq.org/publications-pdf/p-3-2015-02-01-en-visite-inspection-professionnelle.pdf

professional orders in Québec.[123] The Professional Inspection Committee determines the professional inspection programs to be approved by the Board of Directors of the college. Professional inspection programs include physicians:

- chosen at random
- who completed their doctor of medicine (MD) over 35 years ago
- who are outliers on billing and prescribing data
- who are subject to complaints, and
- only performing office-based work and no hospital work.

As part of an inspection, a peer reviewer may proceed to review the practice and the medical records; conduct a formal discussion of findings; additionally conduct a structured oral interview, a standardised interview or direct observation; or administer to the physician questionnaires on profiles of practice and evaluation of competencies or psychometric tests.

The Québec approach is highly regarded by other regulators, and represents a pragmatic screening-based approach, based on potential risk factors. This approach intends that doctors at higher risk of performance issues are screened actively, and follow-up is reserved for indications of potential performance difficulties. There is a substantial remediation process associated with this initiative and the underlying principle is performance enhancement and remediation. A proportion of doctors who are screened require further intervention in a tiered approach.

Goulet et al (2013) have reported a retrospective study of the link between the quantity and quality of CPD activities completed by family physicians (general practitioners) in Quebec and the quality of their practice, based on data collected during PIVs. Three groups were created from among Quebec family physicians who had received a PIV between 1998 and 2005. The groups were:

- Group 1: family physicians who were members of the College of Family Physicians of Canada, which requires participation in 250 hours of CPD in every five-year cycle
- Group 2: family physicians who were not members of the College of Family Physicians of Canada but who had declared at least 50 hours a year of CPD on their Collège des Médecins du Québec annual notice of assessment for the same period
- Group 3: family physicians who had declared fewer than 10 hours of CPD a year.

During the PIV, the following characteristics were examined: record-keeping, quality and number of hours of CPD activities, and quality of professional practice based on three components – clinical investigation, accuracy of diagnosis, and appropriateness of treatment plan and follow-up.

The factors associated with a high quality of practice were privileges in a hospital or local community health centre (institution) and a substantial number of accredited CPD hours. The factors associated with a poor quality of practice were advanced age of the physician, absence of privileges in an institution (hospital or local community health centre), and participation in CPD activities that were more informal, such as reading and non-accredited activities. The authors concluded that the study supported other research showing that CPD activities of sufficient quality and quantity are correlated with a high quality of professional practice by family physicians.

Studies of complaints to health commissions

New Zealand studies – frequency of complaints

In 2006 a large study[124] investigating the relationships between complainants and non-complainants following adverse events in New Zealand public hospitals demonstrated that most medical incidents never trigger a complaint to the New Zealand Health and Disability Commissioner. By linking information about the quality of care complaints with the Commissioner with the adverse-event data gathered in the New Zealand quality of health care study in 1998, the study demonstrated that 0.4 per cent of all detected adverse events resulted in complaints (3/850). Among those categorised as serious and preventable adverse events, only four per cent (2/48) resulted in a complaint.

The authors suggest that complaints represent '… *the tip of the iceberg*' of adverse events. They acknowledged that it is incorrect to interpret their

[123] www.cpso.on.ca/CPSO-Members/Peer-Assessment

[124] Bismark MM, Brennan TA, Paterson RJ, Davis PB, Studdert DM. Relationship between complaints and quality of care in New Zealand: a descriptive analysis of complainants and non-complainants following adverse events. Quality and safety in health care 2006; 15:17 – 22.

results as evidence that complaints may result from the wrongdoing of doctors alone, in that the causes of adverse events in medicine are often multifactorial including individual and systemic factors. Conversely they argue that the prevalence of adverse effects found in their study '… *refutes the notion that most complaints over quality of care are groundless*' (p. 20).[125]

They advised that complaints about severe and preventable injuries may offer a potentially valuable 'window' for further research investigating the causes of threats to patient safety. Furthermore, the authors identified that certain populations were less likely to complain including the elderly, the socio-economically deprived, and those of Pacific ethnicity. This suggests that there is a possible gap in consumer understanding and empowerment.

Australian state-based studies – identifying doctors at high risk of complaints

A case-control study was undertaken of doctors about whom patients had complained to the Victorian Health Services Commissioner between 1 January 2000 and 31 December 2009.[126] The study focused on private practice; the index cases comprised 96 doctors who were the subject of four or more separate complaints; and a control group comprised 288 doctors who were the subject of only a single complaint over the study period.

The results showed that about one in five doctors experienced at least one complaint over the decade. Among doctors who were the subject of a complaint, 4.5 per cent had four or more complaints, and this group accounted for 17.6 per cent of all complaints. This study suggested that clustering of complaints was occurring in a small number of doctors.

Elkin et al (2012) studied the influence of county of qualification on risk profiles in two states in Australia.[127] Among 39,155 doctors registered in Victoria and Western Australia in the study period, 5,323 complaints were made about 3,191 doctors. Thirty-seven per cent of registered doctors were IMGs. The study found that IMGs faced 24 per cent higher odds of attracting complaints than non-IMGs, and 41 per cent higher odds of adverse findings.

A feature of this study was a specific attempt to disaggregate data into specific countries of training. This showed that the overall tendency of IMGs to attract complaints was driven primarily by a significantly higher incidence of complaints among doctors trained in seven countries (Nigeria, Egypt, Poland, Russia, Pakistan, the Philippines and India). IMGs from the 13 other countries examined were no more likely than Australian doctors to attract complaints.

The authors proposed that better understanding of such heterogeneity could inform a more evidence-based approach to registration and more supportive oversight processes if required. Analyses of AMC examination performance data about the assessment processes required for registration, and the regulatory datasets held by AHPRA may assist in this area of future research.

For example, Tamblyn et al (2007) [128] undertook a cohort study of all 3,424 physicians taking the Medical Council of Canada clinical skills examination between 1993 and 1996 who were licensed to practise in Ontario and/or Quebec. Participants were followed up until 2005, including the first two to 12 years of practice. Overall, 1,116 complaints were filed for 3,424 physicians, and 696 complaints were retained after investigation. Of the physicians, 17.1 per cent had at least one retained complaint, of which 81.9 per cent were for communication or quality-of-care problems. Scores achieved in patient-physician communication and clinical decision-making on a national licensing examination predicted complaints to medical regulatory authorities. This finding suggests that early identification of potential causes for later complaints may exist across a spectrum from medical school to independent practice.

National Australian studies – identifying doctors at high risk of complaints

Bismark et al (2013)[129] have since performed a much larger study examining the distribution of

[125] ibid

[126] Bismark MM, Spittal MJ, Studdert DM. Prevalence and characteristics of complaint-prone doctors in private practice in Victoria. Med J Aust. 2011 Jul 4;195(1):25-8.

[127] Elkin K, Spittal MJ, Studdert DM. Risks of complaints and adverse disciplinary findings against international medical graduates in Victoria and Western Australia. Med J Aust 2012;197:448–52.

[128] Tamblyn R, Abrahamowicz M, Dauphinee D, Wenghofer E, Jacques A, Klass D, Smee S, Blackmore D, Winslade N, Girard N, Du Berger R, Bartman I, Buckeridge DL, Hanley JA. Physician scores on a national clinical skills examination as predictors of complaints to medical regulatory authorities. JAMA. 2007 Sep 5;298(9):993-1001.

[129] Bismark, M.M., Spittal, M.J., Gurrin, L.C., Ward, M. and Studdert, D.M., 2013. Identification of doctors at risk of recurrent complaints: a national study of

formal patient complaints to HCEs across Australia's medical workforce and sought to identify characteristics of doctors at high risk of incurring recurrent complaints.

A national sample was compiled of all 18,907 formal patient complaints filed against 11,148 doctors with HCEs in Australia over an 11-year period.

Sixty-one percent of the complaints addressed clinical aspects of care, most commonly concerns with treatment (41 per cent), diagnosis (16 per cent) and medications (eight per cent). Nearly one quarter of complaints addressed communication issues, including concerns with the attitude or manner of doctors (15 per cent), and the quality or amount of information provided (six per cent).

Seventy-nine percent of the doctors named in complaints were male. In multivariable analyses, the number of prior complaints doctors had experienced was a strong predictor of subsequent complaints. Compared with doctors with one prior complaint, doctors with two complaints had nearly double the risk of recurrence (HR 1.93; 95% CI 1.79 to 2.09), and doctors with five prior complaints had six times the risk of recurrence (HR 6.16; 95% CI 5.09 to 7.46). Doctors with 10 or more prior complaints had 30 times the risk of recurrence (HR 29.56; 95% CI 19.24 to 45.41).

Doctors named in a third complaint had a 38 per cent chance of being the subject of a further complaint within a year, and a 57 per cent probability of being complained about again within two years. Doctors named in a fifth complaint had a 59 per cent one-year complaint probability and a 79 per cent two-year complaint probability. Recurrence was '*virtually certain*' for doctors who had experienced 10 or more complaints, with 97 per cent incurring another complaint within a year.

Risk of recurrence also varied significantly by specialty. Compared with general practitioners, plastic surgeons had twice the risk (HR 2.04; 95% CI 1.75 to 2.38), and risks were approximately 50 per cent higher among dermatologists (HR 1.56; 95% CI 1.30 to 1.88) and obstetrician-gynaecologists (HR 1.50; 95% CI 1.29 to 1.76). Anaesthetists had significantly lower risks of recurrence (HR 0.65; 95% CI 0.54 to 0.79).

Male doctors had a 40 per cent higher risk of recurrence than their female colleagues (HR 1.36; 95% CI 1.23 to 1.50). Location of practice (urban versus rural) was not significantly associated with recurrence. Compared with doctors 35 years of age or younger, older doctors had 30–40 per cent higher risks of recurrence; and this risk was similar throughout middle-aged and older age groups, rising only slightly between 46 to 55 years and 56 to 65 years. When adjusted for serious complaints, similar patterns emerged.[130]

The authors also found that the distribution of complaints among doctors was highly skewed: three per cent of Australia's medical workforce accounted for 49 per cent of complaints and one per cent accounted for a quarter of complaints lodged with HCEs.

The findings suggest that it is feasible to predict which doctors are at high risk of incurring more complaints in the near future. The extent to which complaints were concentrated in a small group of doctors was striking, consistent with other studies of complaints and claims by the same and different authors in Australia and internationally.[131] [132] [133] [134]

The finding that doctors under the age of 35 were the least likely to attract complaints may be partly explained by the fact that this age group is still going through a period of supervised training and professional development.

This highly skewed distribution of medico-legal events among Australian doctors in this study has several implications. First there may be a small proportion of doctors who are, by the nature and number of complaints lodged about their care, potentially very 'high-risk' practitioners. The absolute number of such doctors is small. Therefore, an increased focus on proactive interventions to determine the nature of any performance deficits, and early remediation where possible could improve patient safety and reduce the likelihood of adverse events or causes

healthcare complaints in Australia. BMJ Qual Saf 2013;22: 532–540.

[130] Personal communication with author

[131] Bismark MM, Spittal MJ, Studdert DMPrevalence and characteristics of complaint-prone doctors in private practice in Victoria. Med J Aust 2011;195:25–8.

[132] Hickson GB, Federspeil CF, Pichert JW, et al. Patient complaints and malpractice risk. JAMA 2002;287:2951–7.

[133] Hickson GB, Federspiel CF, Blackford J, et al. Patient complaints and malpractice risk in a regional healthcare center. South Med J 2007;100:791–6.

[134] Weycker DA, Jensen GA. Medical malpractice physicians: Who will be sued and who will pay? Health Care Manag Sci 2000;3:269–77.

for complaints in a cost-effective manner. This would be especially valuable at higher levels of risk. Pilot studies in these areas would appear useful in developing understanding of the nature and gravity of the problems, and the need for and style of such interventions.

However, these large-scale studies need to be replicated and developed further with studies designed to address the potential ability to identify Australian doctors at the highest levels of risk in different large-scale datasets and using different methodologies. Replication on other similar datasets such as larger hospitals with risk-management data, as well as continuing studies on large regulatory datasets such as AHPRA would appear valuable.

Equally, the nature of the complaints and their severity and relationship to underperformance needs to be further elucidated. In addition, as complainants may access either HCEs or the Board or both, the relationship of HCE notifications to the Board would be an important area for future development.

Spittal et al (2015), acknowledged in further work that the method employed in the above study, recurrent event survival analysis, is technically complex and out of the reach of most health regulators' general activities.[135] In their most recent study, they created and tested a predictive algorithm using a national sample of more than 13,000 formal complaints made about more than 8,000 doctors, lodged at most Australian state HCEs over a 12-year period. One main predictor sought was the likelihood of another complaint occurring within two years of the index complaint.

The study constructed a simpler 'score' known as the predicted risk of new event score (PRONE score). The variables included the doctor's specialty, gender, the number of previous complaints and the time since the last complaint. The authors proposed that this approach performed well in predicting subsequent complaints and is a simpler risk-scoring system that may be suitable for further investigation in a regulatory setting. They also suggested that a low score might indicate that minimal action is required beyond dealing with the complaint itself, while a high score may indicate that a more active approach is required, and consideration of further interventions or referral based on the nature of the problem.

Further research aimed at developing and testing such cost-effective algorithms is necessary. For example, a current study led by Bismark as chief investigator is replicating the measures used in examining HCE data cited above, on the AHPRA dataset, and will provide valuable further evidence.[136] This study will also establish a cost-effective national minimum dataset of AHPRA notifications data suitable for interrogation by future researchers.

AHPRA is also undertaking a number of other relevant studies, including the relationship between age and gender for notification rates; a longitudinal study examining the effectiveness of regulatory actions, including cautions, conditions and undertakings, on the risk of receiving future notifications; a major three-year project using data from the National Coronial Information System (NCIS) to investigate patient deaths associated with registered health practitioners and medication errors or misdiagnosis; a study of the Medicine in Australia: Balancing Employment and Life (MABEL) database to explore the potential regulatory implications from the impact of personality traits and life events on practitioners at risk of malpractice claims; in collaboration with the Australian Medical Council, a preliminary analysis exploring whether there are specific risks or types of notifications more commonly associated with internationally qualified than non-internationally qualified medical practitioners; and an analysis of practitioners who receive frequent notifications.

Despite promising research in the area of unsolicited patient complaints, which can point to distinct aspects of healthcare that require attention, caution should be expressed in interpreting the results. Birkeland (2016)[137] advises that using patient complaints constructively, however,

> … *necessitates consideration of the manifold facets of patient complaints and behaviours related to making complaints. Patients may have rather different motivations and thresholds for complaining about healthcare delivery and it remains unclear to what degree complaint patterns and over-represented doctor categories provide a balanced reflection of substandard healthcare and quality problems (p.1)*.

[135] Spittal MJ, Bismark MM, Studdert DM. The PRONE score: an algorithm for predicting doctors' risks of formal patient complaints using routinely collected administrative data. BMJ quality & safety. 2015 Apr 8:bmjqs-2014.

[136] mspgh.unimelb.edu.au/research-groups/centre-for-health-policy/law-and-public-health/notifications-to-the-australian-health-practitioner-regulation-agency-identifying-hot-spots-of-risk

[137] Birkeland S. 2016. BMJ Qual Saf. Published Online First: Accepted 8 January 2016.

International studies: identifying doctors at high risk of complaints

Similar findings about the concentration of risk in small groups of doctors have been replicated in the United States. Studdert et al (2016)[138] have just reported a major study of more than 66,000 claims paid against 54,000 practitioners from 2005 to 2014 using American data from the National Practitioner Data Bank. Approximately one per cent of all doctors in this sample accounted for nearly a third (32 per cent) of paid claims. Adjusted analyses showed similar to the studies reported above, in that the risk of recurrence increased with the number of previously paid claims.

Compared to physicians who had only one previous paid claim, those who had three paid claims had three times the risk of incurring another, corresponding in absolute terms to a 24 per cent chance of another paid claim within two years. Male doctors were at higher risk, and younger doctors (25–34 years) were at the lowest risk. Risks of recurrence also varied widely according to specialty – for example, the risk among neurosurgeons was four times as great as the risk among psychiatrists.

Table 2 is reproduced from the study of the *Prevalence and characteristics of physicians prone to malpractice claims*.

[138] Studdert DM, Bismark MM, Mello MM, Singh H, Spittal MJ. Prevalence and Characteristics of Physicians Prone to Malpractice Claims, N Engl J Med 2016; 374:354-362.

Table 2: Variables associated with recurrent paid malpractice claims among physicians with one or more paid claims.

Variable	Hazard ratio (95% CI)*	P value
No. of previous paid claims		**<0.001**
1	*reference*	
2	1.97 (1.86 - 2.07)	
3	3.11 (2.84 – 3.41)	
4	4.19 (3.62 – 4.85)	
5	6.09 (4.92 – 7.55)	
≥6	12.39 (8.69 – 17.65)	
Specialty		**<0.001**
Internal medicine	*reference*	
Neurosurgery	2.32 (1.77 – 3.03)	
Orthopedic surgery	2.02 (1.70 – 2.40)	
General surgery	2.01 (1.65 – 2.46)	
Plastic surgery	1.95 (1.60 – 2.37)	
Obstetrics and gynecology	1.89 (1.58 – 2.25)	
Otolaryngology	1.83 (1.59 – 2.10)	
Urology	1.59 (1.35 – 1.87)	
Ophthalmology	1.37 (1.18 – 1.59)	
Radiology	1.27 (1.13 – 1.44)	
Other specialties	1.18 (1.06 – 1.32)	
Emergency medicine	1.06 (0.94 – 1.19)	
Cardiology	1.05 (0.86 – 1.29)	
Anesthesiology	0.95 (0.82 – 1.10)	
General practice or family medicine	0.91 (0.83 – 1.01)	
Neurology	0.81 (0.65 – 1.01)	
Pediatrics	0.71 (0.59 – 0.85)	
Psychiatry	0.60 (0.43 – 0.82)	
Qualification		**<0.001**
D.O.	*reference*	
M.D.	0.80 (0.75 – 0.86)	
Sex		**<0.001**
Female	*reference*	
Male	1.38 (1.30 – 1.46)	
Age		**<0.001**
25 - 34 yr	0.33 (0.18 – 0.61)	
35 - 44 yr	0.92 (0.87 – 0.98)	
45 - 54 yr	0.99 (0.95 – 1.03)	
55 - 64 yr	*reference*	

Resident		**<0.003**
No	*reference*	
Yes	0.68 (0.53 – 0.88)	
Trained in the United States		**<0.001**
Yes	*reference*	
No	1.12 (1.06 – 1.17)	
Rurality of practice location		**0.89**
Metropolitan	*reference*	
Large rural city	1.02 (0.95 – 1.09)	
Small town or rural area	0.99 (0.89 – 1.12)	
Baseline rate of paid claims^	**1.02 (1.01 – 1.03)**	**0.004**

* Variables for state and payment year were also included in the model, but hazard ratios for them are not shown.
^The variable was specified as the number of paid claims per 1000 physicians, according to year and specialty.

The authors concluded that, like the studies above, a small number of doctors with distinctive characteristics account for a disproportionately large number of paid malpractice claims in the United States.

The study focussed on paid claims relating to death, various levels of physical injury and emotional injury. Although payment does not necessarily indicate that a claim has merit, paid claims are arguably more likely than unpaid claims to involve substandard care. On the other hand, the authors point out that approximately 70 per cent of all claims do not result in payments and these events still, '… *vex defendants, are costly to bring and defend, and flag patient dissatisfaction (or worse)'* p 361.

They continue:

> *In an environment in which a small minority of physicians with multiple claims accounts for a substantial share of all claims, an ability to reliably predict who is at high risk for further claims could be very useful. Our analysis suggests, but does not establish, the feasibility of such prediction. If reliable prediction proves to be feasible, our hope is that liability insurers and health care organizations would use the information constructively, by collaborating on interventions to address risks posed by claim-prone physicians (e.g., peer counseling, training, and supervision). It could present an exciting opportunity for the liability and risk-management enterprises to join the mainstream of efforts to improve quality'* (p 361).

US researchers have developed different ways of predicting doctors who are outliers on patient complaints called The Patient Advocacy Reporting System (PARS®). Hultman et al[139] investigated the PARS system for surgeons. They analysed unsolicited patient complaints verified by trained counsellors in patient relations to determine the malpractice risk of plastic surgeons, compared to dermatologists, all surgeons, and all physicians, from a national patient complaint registry based on the PARS system.

The patient complaint profiles and predicted risk scores of 31,077 physicians (3,935 surgeons, 338 plastic and reconstructive surgeons, and 519 dermatologists) who participated in the PARS system were analysed.

Patient complaint data were collected from 70 community and academic hospitals across 29 states, from 2009 to 2012. In addition to determining the specific complaint mix for plastic surgery compared to all physicians, each physician was assigned a patient complaint risk score, based on a proprietary weighted-sum algorithm, with a score higher than 70 indicative of high risk for malpractice claims.

Over this four-year period, just over half the plastic surgeons (50.8 per cent) did not generate any patient complaints, but those who did

[139] Hultman CS1, Gwyther R, Saou MA, Pichert JW, Catron TF, Cooper WO, Hickson GB. Stuck in a moment: an ex ante analysis of patient complaints in plastic surgery, used to predict malpractice risk profiles, from a large cohort of physicians in the patient advocacy reporting system. Ann Plast Surg. 2015 Jun;74 Suppl 4:S241-6.

received an average of 9.8 complaints from 4.8 patients. The percentage of physicians at high risk for malpractice claims, based upon the PARS index score of patient complaints, was as follows: all doctors in the sample, 2 per cent; all surgeons, 4.1 per cent; plastic and reconstructive surgeons, 2.4 per cent; dermatologists, 1.4 per cent. The overall mix of patient complaints from plastic and reconstructive surgeons was nearly the same as the national cohort of all physicians: care and treatment, 49 per cent; communication, 19 per cent; accessibility and availability, 14 per cent; money or payment issues, 9 per cent; and concern for patient/family, 9 per cent.

They proposed that because patient complaints are a robust proxy for malpractice risk, targeted interventions to decrease patient complaints may improve patient satisfaction and hence reduce malpractice claims and risk management activity. Furthermore, they promoted the view that monitoring unsolicited patient complaints may permit early identification of high-risk surgeons before malpractice claims accumulate.

Pichert et al (2008)[140] strongly advocate for patients' roles in helping to promote safety and reduce risk in several ways. One is to make known their concerns about their healthcare experiences because complaints might suggest unsafe systems and providers. They suggested that responsive healthcare organisations can benefit since patient complaints that are recorded, systematically analysed, aggregated, and profiled by ombudsmen can accurately identify physicians at increased risk of a lawsuit. Furthermore, the PARS system has been twinned with remediation strategies that have been evaluated on a large scale.

In their paper, they describe how aggregated patient complaint profiles have supported non-punitive 'awareness' feedback from trained respected peers,[141] and, only if needed, 'authority' interventions designed to improve safety and reduce lawsuit risk. They found that their experience since 1998 with several hundred such interventions at more than 20 community and academic medical centres shows fewer subsequent complaints associated with most of those who received such feedback. They concluded:

> *We believe the vast majority of physicians at risk for a disproportionate share of malpractice claims are not aware that they stand out from their physician peers. If they are unaware, they are not likely to address risky or unsafe technical and interpersonal behaviors. Unsolicited patient complaints offer a powerful tool for identifying high-risk physicians. Most physicians respond positively if those complaints are captured, reliably processed, and regularly communicated through a physician-driven feedback process (p.8).*

In a more recent analysis, the same group reported more details on the outcomes of the trained physician-led peer feedback process described above. This retrospective, descriptive study used confidential peer messenger debriefing results from data-driven interventions at 16 geographically disparate community (n = 7) and academic (n = 9) medical centres in the United States. Some 178 physicians served as peer messengers, conducting interventions from 2005–2009 on 373 physicians identified as high-risk.

The study noted that most (97 per cent) of the high-risk physicians received their feedback professionally, and 64 per cent were called 'Responders'. Responders' risk scores improved at least 15 per cent, where those who did not respond had scores that worsened (17 per cent) or remained unchanged (19 per cent) ($p < or = .001$). Responders were more often physicians practising in medicine and surgery than emergency medicine physicians, had longer organisational tenures, and engaged in lengthier first-time intervention meetings with messengers.

The authors concluded that 'peer messengers' recognised by leaders and appropriately supported with ongoing training, high-quality data, and evidence of positive outcomes are willing to intervene with colleagues over an extended period of time. The physician 'peer messenger' process reduced patient complaints and is adaptable to addressing unnecessary variation in other quality/safety metrics.

These studies suggest that:

- unsolicited patient complaints (USPs) act as a proxy for at-risk physicians
- when USPs are aggregated systematically and partnered by a confidential peer-

[140] Pichert JW, Hickson G, Moore I. Using Patient Complaints to Promote Patient Safety. In: Henriksen K, Battles JB, Keyes MA, et al., editors. Advances in Patient Safety: New Directions and Alternative Approaches (Vol. 2: Culture and Redesign). Rockville (MD): Agency for Healthcare Research and Quality (US); 2008

[141] This process is called the 'peer messenger process' It was designed by Vanderbilt University Medical Center to address 'high-risk' physicians identified through analysis of unsolicited patient complaints, a proxy for risk of lawsuits, using the PARS system.

feedback process, they provide a strong foundation for alerting 'at-risk' physicians

- many at-risk physicians, but not all, benefit from such peer-mediated feedback
- some physicians may require targeted CPD activities or further interventions, and
- tiered intervention approaches reserve directly assessing doctors' performance in practice to the highest risk groups or non-responders to peer feedback.

Educational interventions relating to underperforming practitioners

In the context of efforts to improve early detection of underperformance, consequent remediation strategies must be emphasised. Nonetheless, the issue of how to remediate doctors who are underperforming is complex. Issues include the conduct of the process, the need for individualisation, who pays, who are the most appropriate providers, what is the role of the colleges, what is considered successful, what type of follow-up processes should be used to determine maintenance of performance, and who is finally responsible. Finally, little is known about the long-term outcomes of remediation programs.

While remediation will apply to relatively few doctors, international commentary has highlighted the need to ensure the approach to remediation of doctors is more structured and consistent.

In 2007 a multinational survey including a focus on remediation of underperformance was undertaken by Kings College London.[142] The authors noted:

> *With regard to remediation processes, the information provided was in many cases less detailed than that about assessment (of performance). In some cases, this reflects the fact that remediation activities are individualised, rather than part of a formally coordinated program. Moreover, many of the assessment programs have only indirect engagement with remediation activities, since provision is delegated to, or taken up by peers and educational bodies in the physician's own community. Overall, the variation between assessment programs with regard to the formality, intensity and rigour of subsequent remediation activities is considerable. None of the programs undertake systematic follow-up in the longer term, even though they might like to do so. The challenges of instituting robust follow-up processes are clearly considerable. Nevertheless, without such follow-up, there is no way of knowing whether improvements are maintained over time or whether the overall diagnosis, prescription and treatment provided was appropriate and successful in addressing the concerns that led to referral in the first place. (p. 29)*

The authors concluded that:

> *Overall, it remains the case that relatively little is known about what type of remedial intervention may work for whom, and there is a continuing lack of consensus about which remediation methods are appropriate in different circumstances. (p. 12)*

In response to this dilemma, in January 2010, the UK Department of Health established a steering group to consider remediation, focusing on improving the ways that competence and capability issues in doctors are managed.[143]

The Group concluded that there were a number of key problems inherent in the current UK system:

- lack of consistency in how organisations tackle doctors who have performance issues
- lack of clarity about where a personal development plan stops and a remediation process starts
- lack of clarity as to who has responsibility for the remediation process
- lack of capacity to deal with the remediation process
- lack of clarity on what constitutes acceptable clinical competence and capability
- lack of clarity about when the remediation process is complete and successful, and
- lack of clarity about when the doctor's clinical capability is not remediable.

The group made six broad recommendations (p.7):

1. performance problems, including clinical competence and capability issues, should normally be managed locally wherever possible

[142] Humphreys C, Locke R. Provision of assessment and remediation for physicians about whom concerns have been expressed – an international survey. National Clinical Assessment Service King's College London 29 September 2007.

[143] Report of Steering Group on Remediation. UK Department of Health 2010

2. local processes need to be strengthened to avoid performance problems wherever possible, and to reduce their severity at the point of identification
3. the capacity of staff within organisations to deal with performance concerns needs to be increased with access to necessary external expertise as required
4. a single organisation is required to advise and, when necessary, to co-ordinate the remediation process and case management so as to improve consistency across the service
5. the medical Royal Colleges to produce guidance and provide assessment and specialist input into remediation programs
6. all those involved in training and assessment need to assure their assessment processes so that any problems arising during training are addressed.

The effect of complaints on doctors

The impact of regulatory complaints on doctors' psychological welfare and health has recently been studied in the UK.[144] While only 8.3 per cent of eligible doctors responded to a tailored survey, 16.9 per cent of these doctors with current/recent complaints reported moderate/severe depression (relative risk [RR] 1.77 [95 per cent CI 1.48 to 2.13] compared to doctors with no complaints [9.5 per cent]). Fifteen per cent reported moderate/severe anxiety (RR=2.08 [95 per cent CI 1.61 to 2.68] compared to doctors with no complaints [7.3 per cent]). Distress increased with complaint severity, with highest levels after GMC referral (26.3 per cent depression, 22.3 per cent anxiety).

Doctors with current/recent complaints were 2.08 (95 per cent CI 1.61 to 2.68) times more likely to report thoughts of self-harm or suicidal ideation. Most doctors reported defensive practice: 82 to 89 per cent hedging and 46 to 50 per cent avoidance. Twenty per cent felt victimised after whistleblowing, 38 per cent felt bullied, 27 per cent spent over one month off work.

Further study of practitioners with moderate and high levels of complaints should include the effects of complaints on their psychological welfare and health and investigate mitigating strategies. In addition, risk-modification and remediation strategies as described above designed to prevent or reduce complaints in high-risk groups should improve the risk to doctors' psychological welfare and health.

Analysis

Revalidation in its many forms is moving ahead internationally. Processes have been implemented in a number of countries and it is inevitable that this will continue. Nonetheless, the discourse around new systems has recently been examined.[145] The authors conclude that: '… *gaps exist for the extent to which (these) systems build on current evidence or theory'*. As a result, the EAG does not think it is appropriate for Australia to simply adopt an existing model from another jurisdiction.

The EAG has undertaken work and considered the international and Australian evidence and the CAMERA report to provide an evidence-based, theoretical background to inform the revalidation debate in Australia.

Our analysis, in terms of the identification and assessment of 'at-risk 'and poorly performing practitioners, is as follows:

A small proportion of Australian doctors are performing poorly

The body of knowledge from regulators and researchers suggests that, undoubtedly, a small proportion of doctors in all countries and in Australia is not performing to expected standards at any one time, or over time.

Studies suggest risk factors for practitioners at risk of poor performance

The number and scale of international studies of the medical practitioner at risk of poor performance, or already performing poorly has increased recently. This includes an important but small number of Australian and New Zealand studies. These studies have a number of risk factors or associations in common.

The strongest risk factors that have been identified and replicated both nationally and internationally to be associated with an increasing regulatory risk profile are:

- age (from 35 years, increasing into middle age and older age)
- male gender
- number of prior complaints, and

[144] Bourne T, Wynants L, Peters M, et al. The impact of complaints procedures on the welfare, health and clinical practise of 7926 doctors in the UK: a cross-sectional survey. BMJ Open 2015;4.

[145] Horsley T, Lockyer J, Cogo E. et al BMJ Open 2016; 6.

- time since last prior complaint

While some regulators (such as in Canada) mandate screening approaches for older doctors, recent studies suggest that risk rises after the age of 35 years.

Additional risk factors may include:

- primary medical qualification acquired in some countries of origin
- specialty
- lack of response to feedback
- unrecognised cognitive impairment
- practising in isolation from peers
- low levels of high-quality CPD activities, and
- change in scope of practice.

The nature of the problem is yet to be fully elucidated. Nonetheless, using a 'risk-matrix' approach to future thinking about identifying doctors at risk of underperformance appears valuable.

Most complaints are about a small number of doctors

In Australia, analyses of HCE data show that a small proportion of doctors receiving frequent complaints is associated with the majority of complaints. Using large commission datasets, investigators have attempted to determine appropriate predictive measures of the likelihood of future complaints based on past complaint indicators. Complex statistical analyses have shown promise, however they are probably beyond the reach of everyday regulatory work, are expensive, or require significant statistical expertise. Simpler and more practical predictive measures have recently been tentatively proposed in Australia such as the PRONE score.

Predicting poor performance: developing cost-effective and practical predictive measures

Cost-effective and practical models are needed to predict the risk of future underperformance. These approaches should be designed to function effectively within the capacity of the everyday work of relevant groups including regulators and HCEs. Developing these models and trialling various combinations of risk factors for effectiveness, feasibility and utility should be given high priority.

Understanding poor performance: there is active research into patterns and consequent risk to public safety

Replication and further development of existing studies with alternative large-scale datasets is essential to understand more fully the nature of the problems associated with underperforming practitioners. For example the current study on the AHPRA regulatory dataset, replicating measures used to examine HCE data, will provide valuable further insights.[146]

We can now predict which Australian doctors are at very high risk of further complaints to HCEs

Researchers have now identified a small proportion of Australian doctors at very high risk of further complaints to HCEs. Now we know this, we must do something about it. This involves promptly and thoroughly assessing the quality of practice of these doctors to better understand public risk, and providing remediation processes or enabling other regulatory action to protect public safety. It will be useful in this context to also evaluate the effectiveness of MSF as a tool to identify aspects of poor performance that are more difficult to assess, such as communication, interpersonal skills and teamwork, professionalism and collegiality.

Developing scaled interventions to match levels of risk

Having identified the cohorts or groups of practitioners at risk of poor performance by applying a risk-matrix approach, it is important to then assess the identified individuals to help determine whether and how they actually pose a risk to public safety. Not all individuals in at risk groups will be under-performing. Other practitioners who are under-performing will improve their performance as a result of feedback or for other reasons and return to safe practice. Cost-effective, early interventions should escalate only as needed.

The EAG considers a tiered approach to assessment matching levels of risk is valuable. In a tiered approach, the extent of the assessment of performance is scaled to match the level of potential risk. A tiered, multi-faceted assessment strategy could start with MSF for low-risk cases, escalating through peer-review and feedback processes, to more thorough performance assessment to fully determine the nature of serious underperformance in doctors as required by regulators.

[146] http://mspgh.unimelb.edu.au/research-groups/centre-for-health-policy/law-and-public-health/notifications-to-the-australian-health-practitioner-regulation-agency-identifying-hot-spots-of-risk

The EAG recognises that many practitioners who receive feedback will return to safe practice without further intervention or remediation.

Specialty-specific MSF and peer review and feedback have been applied by a number of regulators for the early detection of possible poor performance. They have also been shown to enhance the individual clinician's practice when used as part of mandated CPD and to be well accepted as educational tools.

Multi-source feedback

MSF from peers, colleagues, co-workers and patients can effectively detect lower performing 'outliers', in comparison to normative data from peers. MSF is a cost-effective and efficient process that is consistent with the guiding principles on page seven. Used effectively, MSF has been shown to identify gaps in both clinical and professional performance, to trigger self-reflection and to improve practitioner performance especially when suitable peers facilitate the feedback.

The EAG believes that MSF is a useful tool to assess practitioners identified as being at risk of poor performance, that is low-risk to patients. MSF provides a cost-effective process that minimises practitioners' time, supports early detection and provides information about performance gaps. To do this effectively, the MSF should be specialty-specific and will require comparative or 'benchmark' data from peers who are not deemed to be in the 'at-risk' group. This baseline or benchmark data could be gained from college Fellows who select MSF as part of college CPD programs, and/or through pilot studies with data from volunteers, and/or from health services that currently mandate MSF as part of routine performance appraisals. This would harness existing data and knowledge, not replicate it, consistent with the guiding principles. This approach will require cross-sectoral collaboration to develop benchmarks and evaluate. Results will also triangulate the validity of the proposed use of MSF in assessing practitioners who are likely to be at lower risk of poor performance.

Peer review and feedback

Peer-review processes requiring visits to the workplace have similarly shown promise in detecting performance deficits in comparison to peers. These are recognised as more expensive and time-consuming to administer and may be best considered in the Australian context as an intervention, focussed on doctors at higher levels of risk. However, the EAG welcomes the use of voluntary peer review and feedback processes in CPD programs.

Confidential peer-mediated feedback strategies show promise in enabling the early mitigation of risk among doctors with larger numbers of patient complaints, in comparison with peers. Doctors who respond to peer-mediated feedback strategies have been shown to be subject to fewer complaints, post-intervention. Doctors who do not respond to these strategies have been shown to require further interventions. The EAG believes this approach may be useful with doctors who have already been identified as having moderate to high levels of patient complaints or notifications, or higher predictions of risk using risk matrices.

Performance assessment

The most intensive approach, reserved for practitioners who pose the highest risk, would build on current performance-assessment strategies used by regulators after investigation of notifications. Currently these strategies usually involve the direct observation of the practitioner and a number of other related methodologies.

An unresolved question remains about the value of directed assessments in specialised centres including peer observation, cognitive testing, clinical-skills assessments and knowledge tests for highly at-risk practitioners.

Remediation

Remediation should be tailored to the nature and level of the risk. The current knowledge-base about remediation processes and outcomes is not as well developed as knowledge about assessment processes, and is fragmented and diverse. Some studies have been conducted as standalone studies in areas of researcher or organisational interest. There is little information about long-term outcomes of remediation on doctors' subsequent performance. The lack of robust processes surrounding optimal remediation was recognised in the UK, with the formation of a Steering Committee on Remediation to assist thinking for revalidation. In Australia, equally, these weaknesses should be addressed.

The knowledge jigsaw: multiple stakeholders may have knowledge or concern about under-performing doctors

International research indicates that about 6 per cent of medical practitioners are poorly performing at any one time. No Australian research has yet reliably identified how many medical practitioners in Australia fall into this category. Future Australia-specific research should confirm this number. In the meantime, the EAG believes that action is required to identify,

assess and where possible remediate all of these practitioners, in the public interest.

A range of health-sector stakeholders may have knowledge or concern about at-risk and poorly performing doctors, including patients, peers, colleagues, co-workers, employers, specialist colleges, Coroners, jurisdictions, insurers, other data collection agencies, regulators and HCEs.[147]

However, there is not now a common, shared understanding of what each group is responsible for doing with this knowledge, who it should be shared with and who is responsible for addressing the underperformance. It is important to develop a shared understanding of the roles and responsibilities of each stakeholder group and to improve communication and reporting processes.

Figure 3 depicts groups of medical practitioners in Australia in terms of their selected CPD framework and their practice context and the potential responsibility for supporting and managing remediation.

Existing barriers to identifying and communicating concerns about potential underperformance must also be identified and addressed, to enable a whole-of-system approach to proactively identify concerns and enable early intervention, assessment and, where possible, remediation. Another gap is that most research does not address consumer understanding of avenues for complaints about their healthcare. Given that analysis of consumer complaints has been found to predict future complaints, strengthening avenues to gain 'consumer intelligence' about perceived underperformance is important.

Understanding and improving how all these groups interact will be a major piece of work and could completely change our ability to improve the safety of healthcare.

	Practice context	
CPD framework	Practising in an organisation with defined clinical governance structures	Practising outside a defined clinical governance structure
Specialist college CPD	**Shared – college and employer**	**College**
Outside a specialist college (self-directed CPD)	**Employer**	**?**

Figure 3 (repeated): Potential responsibility for managing remediation

[147] Other significant players including clinical networks (such as the Agency for Clinical Innovation Emergency Taskforce or the NSW Surgical Clinical Taskforce, and similar bodies in QLD and WA) as well as legislated Surgical and Anaesthetic Death Committees in each state (the latter are legislatively constrained from advising jurisdictions of poor performers).

Many hospitals have clinical councils with oversight of mortality and morbidity, return to theatre, infection rates, length of stay and similar indicators. Within the Primary Health Networks some are forming Clinical Committees to look at variations between GP practices. Also could include practice accreditation providers.

Recommendations

Recommendation one

Identifying risk: proactive, early identification of doctors at risk of poor performance

Prevention is better than cure. The time has come to deepen our understanding of factors that most reliably and practicably indicate practitioners at risk of poor performance that are relevant to medical practice in Australia. This could provide transformative potential for early intervention to protect the individual and the public from ongoing risk. Finding ways to detect poor performance as early as possible will enable proactive interventions to improve performance.

The strongest risk factors associated with an increasing regulatory risk profile that have been identified and replicated both nationally and internationally are:

- age (from 35 years, increasing into middle and older age)
- male gender
- number of prior complaints, and
- time since last prior complaint.

Additional individual risk factors found in certain studies include:

- primary medical qualification acquired in some countries of origin
- specialty
- lack of response to feedback
- unrecognised cognitive impairment
- practising in isolation from peers or outside an organisation's structured clinical governance system
- low levels of high-quality CPD activities, and
- change in scope of practice.

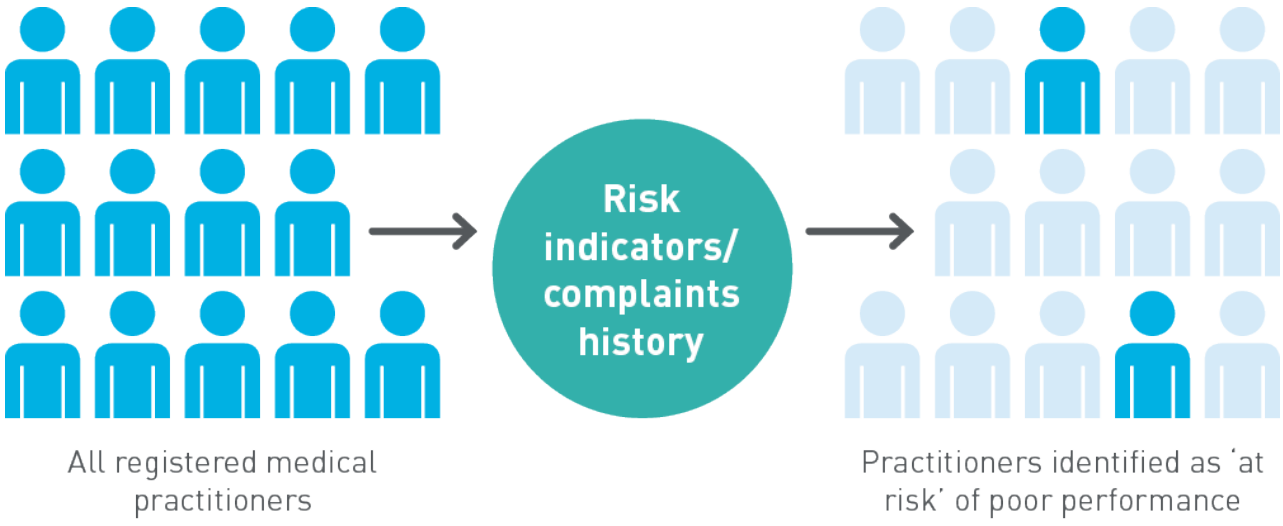

Figure 7: Identifying 'at-risk' practitioners

Recommendation two

Tiered assessment: scaling the assessment to the level of risk

Having identified the cohorts, or groups of practitioners at most risk of poor performance, it is important to then assess the identified individuals to determine whether and how the individuals actually pose a risk to public safety.

Not all individuals in at-risk groups will be under-performing. Other practitioners who are identified as under-performing will return to safe practice simply through the process of being assessed.

Robust early detection and remediation processes are anticipatory and preventive. They should be a non-punitive, individualised and educational, designed to return the doctor to safe practice as soon as possible. The level of assessment of at-risk practitioners should be proportionate to the level of risk, consistent with the guiding principles. Examination-style assessment will not be effective in this task.

The EAG supports a tiered approach to assessment of performance, scaled to match the level of potential risk. A tiered, multi-faceted assessment strategy could start with MSF for low-risk cases, escalating through peer review and feedback processes, to more thorough in-situ evaluation to fully determine the nature of serious underperformance in doctors as required by the regulator. Cost-effective, early interventions should escalate only as needed. Remediation can then be tailored to the nature and level of the risk.The three tiers identified are:

1. Specialty-specific multi-source feedback (MSF) is the recommended starting point to assess whether practitioners in at-risk groups are performing safely, or are underperforming, or are poorly performing. The available evidence indicates that it is an effective and practical performance appraisal tool. MSF gained from colleagues, co-workers, and patients may provide a practical, cost-effective and efficient pathway for the early detection of doctors at risk of poor performance. It is consistent with the guiding principles outlined on page seven. Used effectively in CPD programs, it has been shown to identify gaps in both clinical and professional performance, to trigger self-reflection and to improve practitioner performance. It has also been used to help identify doctors who are not performing to accepted standards.
2. The next level of assessment – for doctors who may pose more serious risk – involves more intensive peer-mediated processes. This could include peer review of medical records, peer review of performance in practice, and/or facilitated feedback based on practice or outcomes data.
3. The highest level of assessment would align with extensive performance assessment, as can be mandated by regulators.

Comparing the results of MSF from ‘at-risk groups’ with results of MSF from practitioners not in at-risk categories will be important for benchmarking.

Recommendation three

Poorly performing practitioners: identifying, assessing and remediating individuals

Responsibility for identifying and remediating under-performing and poorly performing practitioners in Australia needs further development and consensus.

It is essential to develop a clear and shared understanding of the roles and responsibilities of the relevant stakeholders in identifying poor performers and acting jointly on that knowledge to better protect patients. It is important to create an integrated system in which health-sector stakeholders with existing concerns about or knowledge of practitioners who are performing poorly, clearly understand their responsibilities:

- to act on the knowledge or concerns that they have
- for information-sharing in the public interest, and
- to ensure effective intervention to support remediation or action to protect public safety.

It is important to define accountabilities and responsibilities for identifying and acting on under- or poorly performing practitioners. While practitioners who are involved in college or employer processes may have more straightforward paths for local identification of performance issues and remediation strategies, the problem is more complex for practitioners who are isolated from these processes and/or their peers. Responsibility for these practitioners should be identified.

Other related issues include:

- the thresholds for reporting practitioners to regulators in the context of poor performance
- who is responsible for supporting the remediation of identified under-performers

who are not referred to the regulator because they do not meet the threshold for regulatory referral

- how under- or poor performance among practitioners who are outside colleges and work outside organisations with robust clinical governance structures are best identified and managed, and
- the barriers to information-sharing that, if cleared, would enable effective identification, remediation or other action to promote public safety.

Recommendation four

Remediation: tailoring interventions to the nature and level of the risk.

The current knowledge-base about remediation processes and outcomes is not as well developed as knowledge about performance-assessment processes, and is fragmented and diverse. There is little information about long-term outcomes of remediation on doctors' subsequent performance. There is a need for efficient and effective remediation programs for practitioners at risk and who are already poorly performing. International collaborations on enhancing remediation for all groups should be fostered.

Appendix A

Terms of reference

Revalidation Expert Advisory Group

Context

The Board is committed to developing a process that supports medical practitioners to maintain and enhance their professional skills and knowledge and to remain fit to practise medicine. This process is known as 'revalidation'.

Purpose of the Expert Advisory Group

The Board has established the Expert Advisory Group to provide it with technical expert advice on revalidation. In particular, the Expert Advisory Group will develop one or more models for revalidation in Australia and will provide advice to the Board on how to pilot the models so that they can be evaluated for effectiveness, feasibility and acceptability.

Terms of reference

The Expert Advisory Group will:

1. develop one or more detailed models of revalidation for the Board to consider. The Board will decide whether to pilot one or more models of revalidation. In developing the models, the Expert Advisory Group will:
    a. take into consideration the report by CAMERA and any other readily available evidence regarding revalidation but will not reproduce the work done by CAMERA or critique the report
    b. provide advice about a model or models such as:
        - whether there should be a 'one size fits all' approach or whether there should be a targeted approach (e.g. targeting at risk practitioners).
        - whether there should be different approaches to revalidation requirements for different groups of medical practitioners. For example, the Board's registration standard for CPD requires different groups of practitioners to meet different requirements, depending upon their employment position (eg trainees) and their registration status (general or specialist registration).

- whether the Board should be relying on existing structures and processes for revalidation and if so, what changes are necessary to make them fit for revalidation purposes.

c. include a high level assessment of the proposed model(s) against the *COAG Principles for Best Practice Regulation*

2. provide advice to the Board and AHPRA about how to set up pilots of revalidation model(s) so that their effectiveness, feasibility and acceptability can be evaluated
3. at all stages of this project, consider relevant feedback from the Board and Consultative Committee and any other consultations regarding revalidation
4. provide expert advice to the Board about any other issues related to revalidation and its implementation.

Membership

Up to eight members who are appointed by the Board for 24 months or the duration of this work (whichever is sooner) including:

Chair	Professor Liz Farmer
Members	A member with experience in medical regulation A member with expertise in performance management – non medical practitioner One or more members with expertise in assessment of medical practitioners One or more members with expertise in medical education A member with expertise in safety and quality

Staffing to support the Expert Advisory Group

AHPRA will provide secretariat and policy support to the Expert Advisory Group through the Strategy and Policy Directorate.

Meetings and procedures

Frequency of meetings

The Expert Advisory Group will meet at least every two months but it is anticipated that more frequent meetings will be necessary initially.

Meetings can be:

- face-to-face
- via videoconference
- via teleconference

Procedures for meetings

The Chair will preside at the meetings of the Expert Advisory Group. In the absence of the Chair at any meeting, a member elected by the members of the group who are present will preside at the meeting.

As members have been appointed as individuals, they cannot nominate an alternative attendee if they cannot attend a meeting.

AHPRA will provide materials to members at least five days prior to day of the meeting. Materials will be provided electronically, either via email or via access to a secure portal.

A report of the meeting will be drafted and circulated to members.

Payment and expenses

Attendance, travel, accommodation and other relevant expenses will be paid at the same rate as Board members and according to the Board members' manual.

As it is likely that the Chair will do additional work between meetings, the Chair will be paid an equivalent hourly rate for this work. This includes payment to attend meetings of the Consultative Committee.

Reporting

The Expert Advisory Group will provide three-monthly progress reports to the Board – one for the Board and one for the Board to circulate and if necessary, seek feedback from the Consultative Committee.

Models for revalidation and advice on how to pilot the models will be delivered to the Board within 9 months of the first meeting. The Expert Advisory Group can seek an extension from the Board if it is not possible to meet this deadline.

Other matters

In developing models for revalidation, the Expert Advisory Group will take into consideration the objectives and guiding principles on the National Registration and Accreditation Scheme.

Schedule 4, Clause 7 of the National Law states that:

(1) A member of a National Board is to act impartially and in the public interest in the exercise of the member's functions as a member.
(2) Accordingly, a member of a National Board is to put the public interest before the interests of particular health practitioners or any entity that represents health practitioners.

The National Board expects that members of the Expert Advisory Group will act in accordance with the principles in Schedule 4, Clause 7 of the National Law.

Possibility of ongoing involvement

The role of the Expert Advisory Group as defined in these terms of reference finishes once the Group submits the proposed models to the Board. However, there may be an ongoing role for the Expert Advisory Group as the work on revalidation continues, including providing advice on the evaluation of pilots.

The Board will update the terms of reference and membership and will make the necessary appointments when the ongoing need for expert advice becomes clearer.

Appendix B: Expert Advisory Group Membership

Members of the Medical Board of Australia's Revalidation Expert Advisory Group are:

Professor Elizabeth Farmer (Chair)

Professor Richard Doherty

Dr Lee Gruner

Dr Robert Herkes

Professor Michael Hollands

Professor Brian Jolly

Professor Kate Leslie AO

Professor Peter Procopis AM

Professor Pauline Stanton

Medical Board of Australia

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