Expert Advisory Group on revalidation

Final report

August 2017

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Part A

Chair's message

The Expert Advisory Group on revalidation (EAG) is pleased to deliver this report offering options to ensure that medical practitioners in Australia maintain and enhance their skills throughout their working lives. In this report, this is called revalidation.

Undertaking this work has been a challenge and a privilege. We have had the opportunity to research widely and think deeply about how best to shape the landscape of medical practice in Australia, in the interests of the community and to promote public safety. We have been mindful of the Medical Board of Australia's (MBA) clear request for advice and recommendations that are practical, implementable and fair.

We consulted extensively on our interim report and thank all the individuals and organisations who contributed their thoughts and ideas. In particular, we are grateful to the specialist colleges who invested their time and shared their considerable expertise. A summary of what we heard in the consultation is included in this report. The feedback we gathered helped to sharpen our thinking and refine our proposals.

We thank the members of the Revalidation Consultative Committee for their rigorous discussions and constructive advice.

I am grateful to the MBA and in particular, its Chair, Dr Joanna Flynn, for her confidence and trust in asking me to lead this important project. The diligence, helpful guidance and tireless good humour of the AHPRA Medical Team, Helen Tierney, Nicole Newton and Dr Joanne Katsoris, has been invaluable. As Chair, I would like to thank my colleagues on the EAG for their thoughtful contributions and spirited engagement with the issues at the heart of this report.

We commend it to you.

Professor Elizabeth Farmer
Chair, Expert Advisory Group

Executive summary

The fundamental purpose of revalidation is to ensure public safety in healthcare.

In August 2016, the Medical Board of Australia's (MBA or Board) Expert Advisory Group on revalidation (EAG) released an interim report on revalidation. It proposed a two-part approach to supporting medical practitioners to maintain and enhance their professional skills and knowledge and remain fit to practise medicine:

1. strengthened continuing professional development (CPD), and
2. increased proactive identification and assessment of 'at-risk' and poorly performing practitioners.

This final report builds on our interim report, heeds much of the advice and suggestions made by stakeholders during an extensive consultation process and represents our best advice to the Board.

We recommend an integrated approach to revalidation that will help improve public safety and better identify and manage risk in the Australian healthcare setting by:

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

The revalidation process itself should be supportive not punitive, with significant overlap of purpose and outcome from activities designed to strengthen CPD and the activities that proactively identify potential risk and manage it effectively.

Guiding principles

This approach to revalidation in Australia is evolutionary. It is practical, proportionate and tailored to the Australian healthcare setting. It is based on these guiding principles:

- smarter not harder: strengthened CPD should increase value and effectiveness
- integration: all recommended approaches should be integrated with – and draw on – existing systems where possible to 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.

While revalidation in its many forms is progressing internationally, we do not believe Australia should simply adopt an existing model from another jurisdiction. We note that the MBA has ruled out UK-style revalidation and formal examination processes for Australia.

We have tailored our recommendations to the Australian healthcare context and as requested by the Board, made recommendations that are practical, implementable and fair.

To avoid confusion, we advise the MBA to replace the term 'revalidation' with a new description of the actions they propose to take to support medical practitioners to maintain and enhance their professional skills and knowledge and remain fit to practise medicine.

Strengthened CPD

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. We are not proposing to develop and implement fundamentally new processes, but to extract more value from existing CPD programs and encourage development and innovation.

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

- raising the quality and effectiveness of CPD by:
  - requiring the accreditation of all CPD programs
  - eliminating self-directed CPD undertaken outside accredited programs
  - prescribing the extent, proportion and broad types of CPD to be undertaken by all registered medical practitioners

  - requiring all medical practitioners to nominate a CPD program as their 'CPD home'[1]
  - requiring all medical practitioners to prepare a professional development plan (PDP) for each CPD period that is relevant to their scope of practice, and
  - requiring CPD programs to recognise legitimate CPD activities undertaken in the workplace or through other providers
- ensuring equitable access to diverse CPD programs relevant to practitioners' scope of practice by:
  - enabling new CPD programs to be established
  - ensuring existing programs are accessible to all practitioners with a relevant scope of practice
  - ensuring CPD programs guide practitioners who do not provide direct patient care in selecting relevant CPD activities
- supporting improved access to relevant data-sets so medical practitioners can better measure their outcomes and review their performance, and
- improving transition support for medical practitioners changing their scope of practice or planning for retirement.

We also recognise that careful planning and a phased transition will be needed to enable the smooth implementation of the proposed arrangements.

Proactively identifying and assessing 'at-risk' and poorly performing practitioners

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 and future Australia-specific research should ratify this number. In the meantime, action is required to identify, assess and where possible remediate all of these practitioners, in the public interest.

Prevention is also better than cure. We need to be able to identify 'at-risk' practitioners early; assess, support and remediate them when possible; and manage any ongoing risk to public safety. Patients have a right to expect this and as a profession, doctors have a responsibility to ensure it.

Many recommended activities to strengthen CPD will also help to more effectively identify and manage risk. For example, performance review and outcome measurement through strengthened CPD will constructively identify practitioners' performance gaps that may otherwise pose risk to patients, but can be addressed with targeted education or professional development. Equally, increased peer review in a standard CPD process will increase engagement and feedback and provide additional support for professionally isolated practitioners.

We have identified three broad areas of risk and proposed a range of strategies to address them:

Individual characteristics

Address age related risk of poor performance by:

- requiring doctors at 70 years and every three years thereafter to undertake a confidential health check, including cognitive screening and undertake a formal managed performance review process with feedback, credited to the practitioner's CPD
- encouraging CPD providers, medical indemnity insurers and employers to increase support, including promoting annual health checks for later career doctors
- commission research to evaluate the outcomes of the health and performance screening processes and the utility of this approach in detecting performance or health concerns that may influence fitness to practise.

Increasing system responses to practitioners with multiple complaints and/or notifications by:

- requiring practitioners with three or more substantiated notifications and/or complaints over a five-year period, to undertake additional assessments to investigate the potential risks to the public
- interrogating the notifications data it holds about doctors with multiple notifications, to identify patterns of potential underperformance and poor performance
- develop memoranda of understanding (MOUs) with relevant organisations may

[1] Where a practitioner holds registration in more than one specialty, they may have more than one 'CPD home'

assist in information sharing about complaints or potential risks.

Practice contexts

Manage risk from professional isolation by:

- developing agreed indicators to identify and manage risk from professional isolation
    - requiring doctors who meet the agreed indicators for professional isolation to direct the 25 per cent of unallocated CPD activities within their minimum CPD requirements towards managing identified risk from practice context.

Health systems and culture

- Work with jurisdictions, employers, and medical indemnity insurers to address underdeveloped and fragmented systems for the early identification and effective local management of underperformance
- Establish MOUs on processes to facilitate and strengthen robust information sharing about performance concerns/issues between relevant agencies and stakeholders
- Address poor professional behaviours in early career doctors by alerting stakeholders to the future risk to patient safety from early poor professionalism
- Lead work, in partnership with other stakeholders, to develop a shared understanding of the roles and responsibilities of employers, colleges and other health sector stakeholders for identifying issues and managing remediation
- Work with stakeholders and holders of large datasets to find ways to create and share good quality individual, team and comparative data.

About this report

Part A of this report details our key findings and recommendations.

Part B provides the context for this report. It includes the role of medical regulation in Australia, the status of revalidation around the world, outlines the consultation process we undertook in developing this report and gives an account of what we learnt from it.

Part C makes the case for change and provides the evidence to support our findings and recommendations.

Part D contains the appendices, including the glossary and references.

Key findings: Continuing professional development

Introduction

Continuing professional development (CPD) is the means by which members of the medical profession maintain, improve and broaden their knowledge, expertise and competence, and develop the personal qualities required in their professional lives. Contemporary standards frameworks such as CanMEDS 2015[1] define a range of domains of professional practice beyond medical expertise. These include the practitioner's role as an advocate, teacher, communicator and collaborator with others. This report asserts that these domains of professional practice are important and should be included in all practitioners' CPD activities, alongside those that strengthen specific medical expertise.

The MBA has set the standard for CPD that all registered medical practitioners in Australia must meet. Setting this standard, and holding doctors to account against it, is a requirement of the Board set out in the Health Practitioner Regulation National Law as in force in each state and territory (the National Law).

A detailed glossary is included on page 81 of this report. It explains what we mean by the terms used widely in this section such as CPD program, CPD home and CPD activity.

1. Inconsistent CPD requirements exist

The MBA CPD registration standard sets out the CPD requirements of all registered medical practitioners. It is the core regulatory tool requiring all doctors to undertake professional development activities to maintain and enhance the knowledge and skills needed for ongoing fitness to practise.

However, there are inconsistent CPD requirements between medical practitioners with specialist and general registration in the current registration standard. Practitioners on the specialist register must meet all requirements set by their accredited college CPD program. Practitioners with general registration may undertake 'self-directed CPD',[2] subject to certain general requirements.

2. Self-directed CPD undertaken outside accredited programs does not assure quality

The MBA is not currently able to monitor the quality or educational value of CPD undertaken by medical practitioners when it is organised entirely outside an accredited program or framework.

To provide robust assurance about CPD programs and activities, and enable them to be monitored and evaluated, CPD that is undertaken entirely outside an accredited program should not be recognised. This will align CPD requirements and assure consistency in structure, standards, educational value and monitoring of compliance in all CPD programs for medical practitioners with specialist and general registration.

Accredited CPD programs may continue to include relevant CPD activities that individual practitioners undertake through self-directed learning.

Under the proposed model, all registered medical practitioners would apply to participate in the CPD program of the specialist college most relevant to their scope of practice, or to another relevant accredited CPD program.

3. Accredited CPD programs should be accessible to any medical practitioner with a relevant scope of practice

For different reasons, medical practitioners with specialist registration may choose not to continue their association with their original specialist medical college, or may have transitioned to a scope of practice better suited in whole or in part to another college, without necessarily gaining an additional specialist qualification.

These practitioners should be able to access the most relevant CPD program that reflects their actual or intended scope of practice, rather than their original scope of practice.

Accredited CPD programs – or modules within them – should, by negotiation be accessible to all medical practitioners with a relevant scope of practice, including those with general registration. Specialist colleges should allow access to their CPD standards and activities to all practitioners whose scope of practice is relevant, at a reasonable cost.

4. Opportunity for new CPD programs

The National Law encourages innovation in the education of practitioners, which allows for new providers to establish alternative, accredited CPD programs. New CPD programs may, for example,

cater for practitioners with scopes of practice outside current college-based programs.

5. Accreditation of all CPD programs is necessary

To align standards, all CPD programs should be accredited for their educational functions. This would assure program quality and quality assurance/monitoring.

The MBA assigns the accreditation of existing CPD programs to the Australian Medical Council (AMC). Each CPD program either delivers CPD activities directly, or approves, recognises or endorses CPD activities delivered by other agencies. Currently, specialist medical colleges are the only accredited providers of CPD programs.

To assure the quality and relevance of all CPD programs, both specialist college and providers of new CPD programs need clear advice about baseline or minimum educational requirements, quality parameters, the level, type and scope of performance-based and outcomes-based improvement activities to be undertaken and clear standards and advice on monitoring and evaluation requirements.

6. The same quality standards in accreditation and monitoring processes should apply to all CPD programs

A recognised accreditation body must be able to accredit and monitor any emerging new CPD programs against the same standards expected of existing CPD programs.

7. Increased diversity and flexibility of CPD activities within and between programs is required to meet current and future healthcare needs

All CPD programs should maintain and enhance innovation and develop new activities and structures to meet emerging healthcare and practitioner needs. They should retain the ability to approve, endorse or recognise other suitable CPD activities, while remaining responsible for the overall quality of CPD activities. This emphasises the diversity, relevance, responsiveness and accessibility of current and future activities.

Flexibility and tailoring of CPD activities to individual scopes of practice should be encouraged, to align CPD more effectively to individual practitioner needs at all stages of their careers.

8. All doctors should undertake their CPD through the accredited program most relevant to their scope of practice

Colleges have already developed detailed professional standards that outline the knowledge, skills, behaviours and experience needed for their medical specialists to be capable of safe, independent practice in a relevant scope of practice.

Each college is therefore well placed to define the relevant baseline or minimum CPD program requirements for the majority of their own specialist practitioners and provide a suitable structure within which these specialist practitioners can undertake high quality CPD activities.

CPD programs should also support and enable participants who undertake non-clinical or extended scopes of practice to complete their CPD requirements.

9. Every registered medical practitioner needs a 'CPD home'

To ensure clarity and mutual responsibility, practitioners will need to select an accredited CPD program as their 'CPD home'.

Each CPD home would therefore have an identified cohort of medical practitioners doing their program and have a specific responsibility to work with these practitioners to make sure that the CPD activities they undertake are relevant to their current and intended scope of practice. CPD programs would continue to be able to provide relevant CPD activities to practitioners with other CPD homes.

CPD homes would need to provide clear guidance to practitioners about the type and balance of CPD activities required to meet their CPD program requirements. This could include:

- CPD activities provided directly by the CPD program
- CPD activities provided by external agencies that have been recognised, approved or endorsed by the CPD home, and
- self-directed activities recognised, approved or endorsed by the CPD home.

Accredited CPD programs should be able to reasonably accept or decline their role as the nominated CPD home to individual practitioners, based on the fit of their programs to the individual's scope of practice and intended professional development plan.

10. CPD for doctors holding specialist registration in more than one specialty

A practitioner may hold specialist registration in more than one specialty. These practitioners are required under the Board's CPD standard to meet the CPD requirements for every specialty in which they hold specialist registration.

These practitioners would therefore have two or more CPD homes. To avoid unnecessary duplication of effort, recognition of relevant CPD activities across CPD programs should be encouraged.

11. CPD must be evidence-based

Evidence-based approaches to CPD best drive knowledge and skills acquisition and retention, practice improvement and generate better patient outcomes. Evidence-based guiding principles for CPD are set out in Part C of this report. To ensure the effectiveness of CPD, all CPD programs should ensure their program, including any CPD activities they recognise or endorse, align with these principles.

12. CPD should be based on a professional development plan

A written professional development plan (PDP) helps ensure that medical practitioners reflect on the value and appropriateness of proposed CPD activities before and after undertaking them. The PDP should take into account all factors that may influence doctors' fitness to practise.

Practitioners should write a concise PDP for each CPD period. This plan should outline the type of proposed CPD activities that will meet their individual professional development needs. The process should not in itself be a major undertaking, but a 'road map' guiding selection and reflection on relevant activities.

Practitioners will have different levels of experience in developing PDPs and their professional development needs may vary across a CPD period. Significant changes in scope of practice during a CPD period may require the PDP to be amended and the practitioner to reflect on the alignment of their CPD with their scope of practice.

Each CPD program is responsible for guiding the practitioners for whom they are the CPD 'home' participants to examine their current and intended scope of practice, as well as their learning needs and interests, so practitioners can develop and reflect on their own PDP over time.

The random audit processes conducted by the MBA and accredited CPD programs should cover practitioner's individual PDPs and personal reflections, as well as their completion of CPD activities.

13. Minimum annual requirements for each practitioner's CPD activities are required

CPD is an ongoing professional development activity that needs to be undertaken regularly to support continuous learning, reflection and professional development.

While CPD can be expressed as categories, points and hours, all registered medical practitioners must complete the equivalent of **at least** 50 hours per year, each year. This is the current minimum requirement for doctors holding general registration and should remain:

- because better aligned, not just more CPD will best drive practice improvement and improve patient safety
- to be consistent with New Zealand requirements for bi-national colleges, and
- to reflect the guiding principles set out in Part C of this report.

This is a minimum requirement and many doctors regularly exceed this.

14. Medical practitioners should participate in three core types of CPD

CPD needs to be broadly based, to improve all aspects of practice. We recommend requiring medical practitioners to participate in three core types of CPD, with activities prioritised to strengthen individual performance. All recognised CPD activities need to be evidence-based and involve a prescribed, balanced mix of:

- validated educational activities
- reviewing performance, and
- measuring outcomes.

Most practitioners are time-pressured and must be able to balance the demands of patient care and CPD. It is vital, however, that all practitioners undertake more effective, not simply more, CPD to improve their knowledge, performance and clinical outcomes. Individual medical practitioners will remain financially responsible for their CPD activities so it is important that CPD developments are well-designed to stay as far as possible within the cost and time structures that are currently in place.

The work of all registered practitioners has potential implications for patient care. As a

result, all practitioners, including those who do not provide direct patient care, should identify and review the performance and outcomes benchmarks relevant to their scope of practice.

Figure 1 indicates activities from each type of CPD. It is not an exhaustive list and CPD programs are best placed to identify which CPD type best describes any CPD activity.

15. CPD activities should be allocated proportionately each year across three types

Practitioners must allocate their minimum 50 hours of annual CPD proportionally across each of the three types of CPD described in Section C, as follows:

- at least 25 per cent of the minimum CPD required annually should be 'validated educational activities'
- at least 25 per cent of the minimum CPD required annually should 'review performance'
- at least 25 per cent of the minimum CPD required annually should 'measure outcomes', and
- the remaining 25 per cent of the minimum CPD distributed across any types of CPD.

CPD undertaken that exceeds these minimum requirements can be of any type, provided the requirements of the specific accredited program are met.

Determining the balance and proportion of CPD activity undertaken by individual practitioners should result from collaboration between the individual practitioner and their CPD home and be reflected in their PDP.

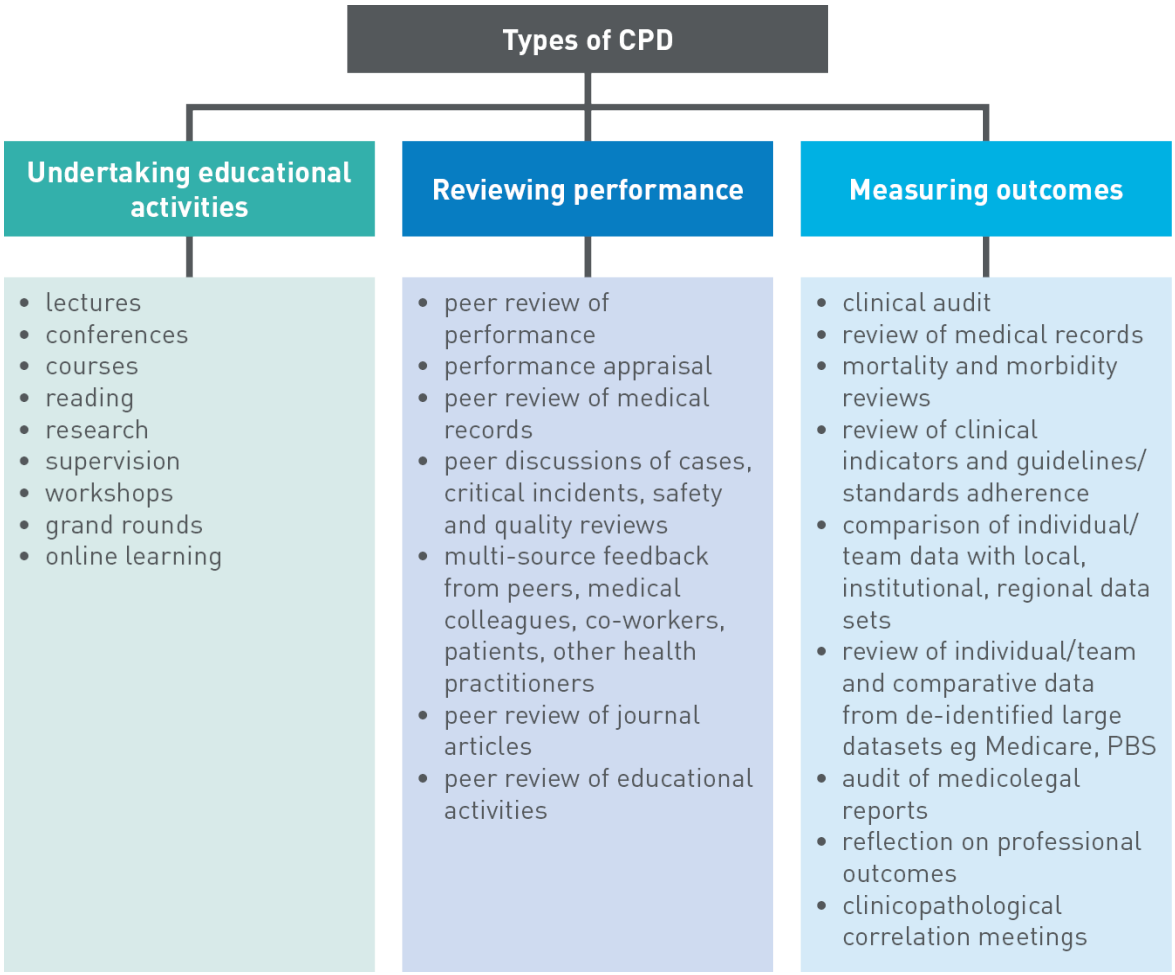

Figure 1. Types of CPD

16. Australian doctors need better access to high-quality data

Currently, there are significant gaps in the ready availability of data to support individual clinicians' audit activities in different specialties. This is a major impediment to individuals, teams and institutions improving patient outcomes.

Active engagement with the holders of potential practice-based and larger or aggregated data sources (such as from Medicare, health departments, hospitals, Primary Health Networks, practices and clinical registries) is necessary to enable doctors to receive individual and comparative data that will support more effective and efficient reflection on their performance and outcomes.

17. Guidance will be needed for practitioners in non-clinical roles

Some doctors are not directly involved in patient care. Doctors with roles that do not wholly or partly involve direct patient care, such as those with leadership or executive management roles, usually have a primary specialty. The extent to which CPD relating to this specialty is relevant to these doctors' current scope of practice is determined by the balance of clinical and non-clinical work in their scope of practice.

Mainstream specialty CPD activities provided by a doctor's specialist college may not be fully relevant to a doctor who no longer practises in the specialty. Flexible CPD arrangements and recognition between accredited CPD programs may meet the broader CPD needs of doctors with a balance of clinical and non-clinical roles.

Some specialist colleges have created suitable pathways and activities so members who do not provide direct patient care at different stages of their career can demonstrate professional outcomes under the existing CPD framework. For example, a non-operating surgeon who now undertakes medico-legal reporting can undertake a structured audit of their reports as an outcome measure. Leadership and continuing development of this sphere of activity should be encouraged.

The same overall framework for CPD balanced across educational activities, reviewing performance and measuring outcomes – is equally applicable to doctors who provide direct patient care and those who don't. However, practitioners in partly or entirely non-clinical roles will need clear guidance, examples and support from their CPD home to make sure that their PDP and CPD activities reflect their current scope of practice.

18. CPD effort is currently duplicated

Many medical practitioners undertake activities at work that meet the requirements of the MBA's CPD registration standard and warrant recognition as legitimate CPD activity recognisable by CPD programs.

To avoid unnecessary duplication of effort, CPD programs need to have sufficient flexibility to recognise legitimate work-based professional development activities, such as hospital-based audits, quality-assurance and relevant quality improvement activities, multi-source feedback (MSF) and performance appraisals.

19. Employers should support quality CPD

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 in-house education, peer review processes and in providing data-rich environments that support the assessment of performance and improvement of patient outcomes.

20. There is an important role for consumers

It is essential that the public understands how a doctor's CPD works to improve health care. The public should be aware of all aspects of revalidation and its stated aims. To encourage active patient involvement in CPD activities, they should be well informed about how doctors may use their feedback, peer visits and de-identified healthcare outcomes to improve the quality of their care. Consumers should also be able to contribute actively to developments in and evaluation of CPD approaches.

21. There is inadequate support for medical practitioners transitioning to retirement

International evidence shows that older doctors may be at higher risk of poor performance and be reluctant to retire. However, little guidance is available to support doctors' transition to retirement. Improved education and support programs for assisting later career medical practitioners to transition to retirement are needed.

Colleges, other CPD providers, employers, doctors' health advisory services, and insurers have a clear role in developing and disseminating guidance on these issues and promoting annual health checks for all doctors.

CPD programs should have – or enable access to – specific activities to support practitioners to successfully transition to retirement. Employers and managers also play a valuable role through employment and credentialing processes. Similarly, medical indemnity insurers and superannuation companies may provide a substantial and confidential form of support and planning advice for effective transitions to retirement which should begin early in a practitioner's career.

22. Reporting obligations for completion of CPD

The MBA's CPD registration standard sets out the Board's requirements of all registered medical practitioners in relation to CPD activity. Accredited CPD programs must work actively with all practitioners for whom they are the CPD home, to help them meet their program requirements.

The MBA needs to know which medical practitioners have met the CPD registration standard and be able to consider whether any further regulatory action is needed for those who have not. CPD homes should report non-compliant practitioners for whom they are the CPD home, no more than three months after the end of the nominated CPD cycle.

Registered medical practitioners must continue to make a declaration on their annual medical registration renewal application about their compliance with the MBA's annual CPD requirements. They will also need to identify their CPD home provider(s).

23. A phased transition period is required

Accredited CPD programs will need to ensure that the CPD they approve demonstrates clearly that it not only focuses on knowledge but also aims to improve performance in practice and patient outcomes for each individual doctor.

Careful planning is required to enable the smooth implementation of an evidence-based best practice approach to CPD. Stakeholders actively involved in CPD will need to work systematically towards common goals to accelerate the progress towards quality CPD programs for all doctors. A phased transition will minimise stress on resources, enable new providers to emerge and a robust accreditation framework for them to be established.

Implications of strengthened CPD

There are implications for medical practitioners and accredited CPD providers in strengthening CPD.

For medical practitioners

To ensure that all registered medical practitioners maintain and enhance their professional skills and knowledge effectively and remain fit to practise medicine throughout their working lives, they should:

- nominate an accredited CPD program as their CPD home
- participate in a CPD program that meets the MBA's requirements, as set out in the CPD registration standard
- develop an individual professional development plan (PDP) for each CPD period, which identifies their planned activities to meet professional development needs
- undertake a minimum of 50 hours per year of CPD activities that meet the requirements of their CPD home
- ensure their minimum required CPD is allocated proportionally across three types of CPD as follows:
    - at least 25 per cent of the minimum CPD undertaken annually should be an educational activity
    - at least 25 per cent of the minimum CPD undertaken annually should review performance
    - at least 25 per cent of the minimum CPD undertaken annually should measure outcomes, and
    - the remaining 25 per cent of the minimum CPD can be distributed across any type of CPD.
- undertake any CPD that exceeds minimum requirements from any type of CPD
- complete and reflect on their CPD activities and review their PDP for the period.

For accredited CPD programs

Specialist medical college CPD programs or other accredited CPD programs will need to:

- ensure their CPD program meets the MBA's requirements

- provide a flexible CPD program accessible by all registered medical practitioners with a relevant scope of clinical and/or non-clinical practice
- have an identifiable cohort of medical practitioners for whom they are the nominated CPD home
- assist their identified cohort of practitioners as required to reflect on their learning needs and current/future scopes of practice and ensure these are reflected in each practitioner's PDP
- support their identified cohort of practitioners to undertake a suitable CPD program
- critically evaluate and refine their CPD program to support continuous quality improvement, and
- report to the MBA at the end of the CPD cycle the practitioners for whom they are the CPD home who have not successfully completed the CPD program.

Key findings: Proactively identifying and assessing 'at-risk' and poorly performing practitioners

Introduction

Australians trust their doctors. They also expect that measures are in place to identify poorly performing doctors and protect patients from them. The MBA, the medical profession and individual registered medical practitioners have a responsibility to ensure this trust is justified and that these expectations are met.

The EAG believes it is time for the MBA, and other stakeholders in the medical profession, to take steps to proactively identify, assess and manage 'at risk' and poorly performing practitioners. This will complement recommended steps to strengthen CPD.

There is currently no single, valid, reliable, and practical screening tool in use internationally to identify potential poor performance. Despite this, it is essential for public safety to find ways to identify, assess and if necessary remediate 'at risk' practitioners.

Among international health practitioner regulators, risks from performance deficits have typically been managed responsively. Efforts are usually made after a complaint or notification is lodged. Some regulators, however, apply focused screening interventions for performance to all doctors as well as specific, identified high-risk groups.

There has been increased awareness of the complexity of risk and the modification of risk by better supports to safe practice. The interplay of these factors is now the focus of increasing international regulatory attention, action, research and evaluation.

Areas of risk

International literature and practice now shows that there are a number of identifiable and significant risks to patient safety from medical practitioners at risk of poor performance that can be managed or minimised through action or leadership by the MBA.

These identifiable risks arise from three broad areas and within these, the EAG believes the following are specific and manageable risks to be addressed as a priority:

1. Individual characteristics

a) age related risk of poor performance, and

b) medical practitioners who are the subject of multiple complaints or notifications.

2. Practice contexts

a) professionally isolated practitioners.

3. Health systems and culture

a) underdeveloped and fragmented systems for the early identification and effective management of underperformance

b) barriers to inter-agency information sharing about risk

c) poor professional behaviours in doctors are not fully addressed

d) variable structures for remediation and patchy access for practitioners, and

e) barriers to accessing patient outcome data for improving safety and quality.

The EAG has identified and analysed these risks and recommends actions the MBA can take alone and in partnership to address them in the short, medium and longer term.

1. Individual characteristics

a) Age related risk of poor performance

In March 2017 in Australia, there were 5,596 medical practitioners aged 70 years and over and 865 aged 80 years and over, who are registered to practise medicine.[3] Many of these doctors play an important role in our health system, practise effectively and should remain in practice as long as quality of care and patient safety are not endangered. However, there are increasing numbers of older doctors who may also face declining physical and cognitive health. Given our knowledge of age and health-related risks to performance, we have a responsibility to actively manage these to ensure that older doctors provide safe and effective care for patients.

Age related risks are multi-factorial

Studies about how quality of care evolves over a doctor's career are the focus of increasing attention. While studies suggest that doctors' performance, on average, declines with increasing years in medical practice, the effect

of age on an individual doctor's outcomes is variable.

Importantly, age related risks of poor performance are likely to be multi-factorial. For example, older doctors might have decreased clinical knowledge, adhere less often to standards of appropriate treatment or prescribing, perform worse on process measures of health care quality in relation to diagnosis, screening, and preventive care and maintain substandard clinical records. They may have had variable levels and quality of CPD over their careers or be more likely to work in collegially unsupported environments.

Recent studies also suggest that age may be associated with reduced patient outcomes, especially for practitioners in low volume practice.

Physical and cognitive decline may affect a doctor's performance

Evidence indicates that some older doctors experience physical and cognitive decline, which may affect their ability to provide safe care. Applying current research findings, it is possible that a significant number of currently registered medical practitioners aged 70 and over are at risk of poor performance caused by cognitive decline and many more that are experiencing physical decline. Physical decline in an individual is often easier to recognise than cognitive impairment. Cognitive decline is cumulative and may be less obvious to the affected practitioner.

Given the unpredictable trajectory of physical and cognitive decline, there is a need to ensure practitioners are aware of their current health and any potential impacts of this on their performance. Older practitioners may be able to modify their scope and style of practice and increase supports to mitigate physical and/or cognitive changes and this should be encouraged.

The potential risks need to be managed

Risks to patient safety from poor performance and/or undetected physical or cognitive decline in doctors aged 70 and over needs to be managed.

International regulatory practice designed specifically to address these risks includes routine mandatory screening of the performance of practitioners over a certain age or length of clinical career, most commonly initially through multi-source feedback and/or a peer review process.

These approaches, whether focussed on known risks due to age or applied to all registered practitioners, aim to proactively identify practitioners at risk of poor performance. If initial screening identifies performance concerns, practitioners are assessed more closely to identify the nature and extent of performance concerns. Tailored interventions and follow-up are applied to support and ensure return to safe practice.

Any process that routinely screens older doctors in Australia needs to balance the responsibility to protect patients from harm from undetected poor performance with the costs and benefits. It must be fair to all doctors, including those who have no performance concerns, and avoid unnecessary loss of workforce.

Mandatory health and performance review is appropriate

Section nine of the MBA's *Good Medical Practice*: *A code of conduct for doctors in Australia*, sets standards to help doctors maintain their health and wellbeing and specialist colleges commonly recommend their members have annual health checks.

There is increasing evidence that regular mandatory health checks, including cognitive screening of doctors aged 70 and over, are necessary to protect public safety by identifying and assessing doctors at risk of undetected poor performance.

If no performance concerns are identified, these doctors can remain in active, safe practice. If performance concerns are identified, action can be taken to return these individuals to safe practice when possible, or support their transition to different professional roles that do not pose risk to patients, or to retirement. Colleges, employers and medical indemnity organisations each have significant roles in supporting these activities.

Given the potential risk to the public from poor performance and undetected physical or cognitive decline in doctors aged 70 and over, screening interventions are clearly warranted.

Further research into potential risks to the public is needed

While there may be legal obstacles to taking action to manage this known risk, the evidence clearly indicates a significant risk to public safety. If legal barriers prevent action to manage this known risk, then as a minimum, further research is required to investigate the risk to public safety from undetected poor performance and/or physical and cognitive decline from doctors in Australia aged 70 years and over.

The results of robust research and evaluation are essential to provide evidence to guide future regulatory practice in Australia concerning the fitness to practise of older doctors.

There is inadequate support for doctors' career-planning for retirement

Doctors need increased support for career planning for transition to retirement strategies to manage these transitions successfully. There is an important role for CPD providers, employers and medical indemnity insurers to contribute to different aspects of these supports.

b) Medical practitioners who are the subject of multiple complaints

In Australia, a small proportion of doctors are the subject of frequent complaints. Studies show that medical practitioners who attract multiple complaints also have a very high probability of incurring further complaints. While Australian health practitioner regulators currently use a range of strategies to deal with these doctors, more needs to be done. This will require accessing information about individual poor performance that is held by different agencies, but rarely shared.

It is also important to differentiate between complaints made and complaints substantiated. Notifications and complaints may occur for a range of reasons and not all are substantiated. As well, not all of those substantiated involve the risk of harm to patients. In the context of revalidation, we are referring to notifications and complaints that are substantiated and may pose a risk to patient safety.

Some doctors are prone to multiple complaints

A three-year study, the largest of its kind ever conducted in Australia, found about three per cent of Australia's medical workforce accounts for nearly half of all complaints made to health practitioner regulators or complaints entities.[4]

This disproportionately high risk of continuing complaints in a very small number of doctors makes clearly evident the pressing need for earlier intervention to prevent the escalation of further complaints and, when relevant, action to protect public safety.

Failing to rule out potential risk cannot be justified

Identifying complaint-prone doctors early provides an important opportunity for the Australian Health Practitioner Regulation Agency (AHPRA) and the MBA to assess the performance of these practitioners more closely, identify potential unsafe practice and remedy any problematic clinical and professional deficits. Action to improve the care being provided by a relatively small number of these 'high-risk' practitioners is economical, will improve safety and quality and quantifiably improve the current regulatory system.

It is not yet clear how, or at what point, multiple complaints indicates a performance issue that increases public risk, but failing to rule out or act on potential risk to patients from practitioners with multiple complaints is unjustified.

Closer examination of patterns and frequency of complaints about poor performance is warranted

Closer assessment of practitioners with multiple notifications aims to identify potential unsafe practice. Assessment should be tailored and scaled to the level and type of potential risk. If further assessment identifies a significant potential risk to patients, then a structured, MBA-mandated performance assessment may be warranted.

If performance deficits are identified, practical and effective interventions will be required that balance public protection with remediation and the return of the practitioner to safe practice. Early identification and intervention would therefore lead to improved quality of care for patients and further reduce complaints.

Research should continue to examine the performance deficits of complaint-prone doctors. The outcomes of managed, targeted interventions to improve performance should be evaluated.

In addition to doctors at high-risk of recurring complaints, a deeper understanding of patterns and frequency of complaints about under-performance or poor performance in general is needed. This information is valuable to many other stakeholders including individual doctors who wish to better understand their risk, CPD providers, employers and insurers.

2. Practice contexts

a) Professionally isolated practitioners

The impact of professional isolation

Practice context has significant potential to impact positively and negatively on practitioner performance. Supportive clinical governance frameworks, working with peers and in team environments combine to improve performance. Equally, professional isolation can expose individuals to greater risks of poor performance. For example, practitioners who work in isolation from peers have limited daily opportunity to discuss or compare their clinical decisions or challenges with their peers compared with colleagues who work in team environments in which peer interactions and quality assurance systems are readily available.

Professional isolation is not the same as geographic isolation, although there may be overlap. Professionally isolated doctors are collegially unsupported. They may practise in contexts removed from clinical governance structures, as locums or in deputising positions; in part-time positions with limited patient contact hours; in solo private office-based practice; by practising for a high number of hours of patient contact; or providing after-hours on-call work with little non-clinical time.

Educational interventions for professionally isolated doctors through CPD

Doctors who work in practice environments with limited peer interactions should be supported to address this by prioritising peer-based educational interventions in their personalised professional development plan (PDP).

For example, professionally isolated practitioners should prioritise CPD activities that increase their regular access to peer support, feedback and engagement. This could occur through activities including formal and informal peer networking, peer review processes, peer visits, clinical sessions with peers, obtaining multi-source feedback and regular video/teleconferencing. When feasible, clinical networks could assist practitioners to compare aspects of their patient outcomes with benchmarks established by peers in similar practices, through data comparison.

Under the proposed model, individual practitioners will develop their PDP in partnership with their CPD home. CPD programs should proactively build practitioners' awareness of the possible risks inherent in their practice context and enable them to develop a tailored CPD program to mitigate these by increasing supports. Employers (where relevant), have a responsibility to ensure that professionally isolated doctors have adequate non-clinical contact time to engage in the peer processes described above.

3. Health systems and culture

a) Underdeveloped and fragmented systems for the early identification and effective management of underperformance

There are fragmented and weak structures for the early identification of poor performance in Australia's health system and no common understanding of roles and responsibilities of different agencies for managing identified concerns.

Systems and cultural change

Early proactive identification of potential or actual poor performance in the workplace (upstream identification) is strongly supported by professional, regulatory and consumer stakeholders. While there is currently no obvious simple solution to achieve this, international studies indicate that substantial gains can be made by taking a systems-based approach.

Essential features in identifying and managing underperformance early and returning practitioners to safe practice as soon as possible include:

- strengthening appropriate avenues in the workplace for raising concerns about risks
- challenging perceptions that raising concerns early about risk or performance of colleagues is not collegial
- building effective structures and commitment to sharing information about risks within and between work environments

- upskilling health professionals in giving and receiving constructive feedback, and
- improving access to local interventions or remediation for identified concerns.

Cultural change in the medical and wider health professions embracing the importance of early identification and improvement is essential to achieving desired outcomes. Stepped and proportionate approaches have been shown to provide a supportive, non-punitive, educationally orientated approach that enables the rapid resolution of concerns and addresses small issues before they escalate.

The EAG notes the MBA does not have direct control over these system-wide issues. However, it is a vital central agency that can support progress towards these goals.

An approach to early identification and proportionate interventions

Intervention approaches have been developed and applied nationally and internationally in different settings for the early identification of concerns about performance and behaviour in the medical workforce. The fundamental features are:

- establishing specific communication and governance systems to enable performance concerns in the workplace to be raised early
- providing effective collegial feedback with stepped and proportionate local interventions where concerns are identified
- fostering a culture of effective feedback and continuous learning leading to performance improvement.

The fundamental features of these approaches should be further developed in the Australian context to help address underperformance proactively. Types of stepped interventions could include:

- raising awareness and enabling self-correction: An informal, confidential one-on-one direct feedback session with a peer or colleague when a possible performance concern or area for improvement has been raised. For example, through formative feedback provided in CPD activities or the workplace by a trained peer.
- raising awareness and creating specific options for addressing concerns: Formal meeting(s) with trained peers for discussing repeated performance concerns or issues. This would be accompanied by the development of options and follow up.
- prescribed guided interventions to remediate more serious concerns: Tailored interventions, remediation and follow up provided by employers, peers, colleges, CPD providers, or other suitable education providers including medical indemnity insurers.
- regulatory referral as a last resort unless mandatory reporting provisions apply.

This stepped approach provides a supportive, non-punitive, educationally orientated approach to promote the rapid resolution of concerns and address smaller issues before they escalate into larger ones.

The knowledge jigsaw: Information sharing about under-performing doctors

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 health complaints entities (HCEs).

However, Australia lacks a common, shared understanding of what each group is responsible for doing with this knowledge, who information should be shared with and who is responsible for addressing under-performance. There are also barriers to inter-agency information sharing about risk. Some of these are legal, some historical, some attitudinal and almost all resolvable with a shared commitment to improving public safety.

b) Barriers to interagency information sharing about risk

There is consensus among stakeholders consulted during this process that a shared understanding of the roles and responsibilities of different agencies for dealing with identified concerns is currently lacking and that a system-wide approach would be beneficial.

Recent initiatives by the Royal Australasian College of Surgeons (RACS) to address bullying and harassment, in partnership with health service providers, indicate that with a common commitment, legal impediments can be overcome. Cultural impediments can also be addressed individually and through partnerships between employers and educational institutions, where there is a shared commitment to improvement.

To achieve change, we need a shared understanding of the roles and responsibilities of employers, colleges and other health sector stakeholders for identifying issues and managing remediation, and consensus about the threshold for regulatory referral. This would address the current confusion about who knows what, whose job is it to do something about it, and when the regulator should be informed.

c) Poor professional behaviours in early career doctors are not fully addressed

High standards of professional behaviours are as important as a doctor's clinical knowledge and skills. The MBA has identified the standards of behaviour necessary for professional practice which are shown in the glossary. Colleges should be proactive in promoting these standards of professional behaviours to their members and addressing deficits among individual members.

Poor professional behaviours among medical students and recent graduates are recognised in the international literature as an indicator of future unprofessional performance. The public is therefore at risk if poor professionalism in medical students or early career doctors is not satisfactorily addressed.

Teaching strategies that promote good professional behaviours are not fully developed. Lack of professionalism is also recognised as an extremely difficult deficit to address and as such, if necessary, preventing unfit students from entering the profession or unfit trainees from becoming specialists is critical to prevent adverse outcomes.

Further development of curricula and advocacy for necessary action is required to improve the ability of educational institutions to address these challenges. This is a system-wide responsibility.

Appropriate professional behaviours should be a mandatory requirement for graduation and for specialist qualifications, given it is now a requirement of the current accreditation standards of the AMC for medical education programs.

Research has also shown that risk of future notifications and complaints is related to other deficits in examination performance in medical school or speciality training. This should be further examined.

d) Patchy access to remediation and variable structures for it

Gaps in solving performance issues and failed remediation both create a risk to patients. The current system of remediation in Australia is fragmented and evidence about successful approaches is limited and poorly shared. The lack of readily available resources and facilitating structures, including supervision, limits the access of all parties to effective remediation. Follow up to ensure remediation has been successful is essential, but inconsistently done.

There are no nationally consistent and accessible structures available to support poorly performing practitioners return to safe practice

When a practitioner's poor performance has been identified, there should be an effective and timely process of remediation to support their return to safe practice. The type of remediation must be individualised to reflect the practitioner's needs, including the nature of identified performance issues, their health and capacity to undertake remediation.

The current system of remediation is fragmented and the literature provides scant guidance on successful approaches. The lack of readily available resources and facilitating structures, including supervision, limits the access of all parties to effective remediation and follow up after remediation has finished is necessary to ensure remediation has been successful.

Multi-institutional, multi-stakeholder collaboration is needed

Multi-institutional, multi-stakeholder collaboration is needed to develop a universal, robust and accessible system for remediation of poor performance of medical practitioners in Australia. We need 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.

Many stakeholders should be involved in remediation, including:

- accredited colleges and related specialty societies
- other accredited CPD providers
- universities
- employers
- jurisdictions
- medical indemnity insurers
- regulators
- health complaints entities
- training programs (e.g. GP regional training providers)
- private providers
- rural workforce agencies
- Primary Health Networks (PHNs)
- doctors health advisory services (psychological support)

Remediation needs to occur as close as possible to where the doctor works, within a nationally consistent and accessible structure. Further work needs to be done to identify the best model for ensuring effective and equitably accessible remediation opportunities in Australia.

The MBA is in a prime position to lead this work, which will also need to identify the role of the regulator in any structure and in supporting its development.

A possible new model to manage remediation

A possible new model to be considered could involve an agreed national framework, supported by a series of local or regional clusters of expertise to manage individuals' programs, support doctors and providers of remediation services locally and undertake follow-up and reporting. Providers of remediation may include colleges including any specialty divisions, employers, insurers and groups with special expertise as required.

The current model for the Doctors' Health Service Pty Ltd – which is funded by the MBA - as a national framework and run at arms-length - could be usefully examined. It may be helpful to consider aspects of this model when developing a robust remediation framework for Australia.

e) Barriers to accessing patient outcome data for improving safety and quality

There are currently inadequate accessible patient outcomes data in many areas of medical practice, which represents a major challenge to safety and quality improvement for individuals, teams and institutions.

Readily available, good quality patient outcome data are necessary for doctors and teams to work most effectively on improving their patient outcomes.

Active engagement of a diverse group of stakeholders from electronic medical record software companies and Primary Health Networks to the holders of 'large data' sources (such as Medicare, health departments, hospitals and clinical registries) is necessary to provide all doctors with access to good quality individual, team and comparative data.

Recommendations for strengthened CPD

1. Accreditation

a) The MBA should ensure a suitable accreditation body accredits all CPD programs for their educational functions to assure program quality, quality assurance and monitoring.

b) All registered medical practitioners should undertake CPD within an accredited program relevant to their scope of practice.

2. CPD home

a) Individual medical practitioners should choose an accredited CPD program to be their 'CPD home'.

b) CPD homes, in partnership with their cohort of practitioners, should ensure that any CPD activities undertaken with other CPD providers are relevant to the practitioner's scope of practice.

c) All CPD homes should report to the MBA any practitioners doing their program who have not fully complied with their CPD program requirements, no more than three months after the end of the CPD period.

3. Professional development plans

a) The MBA should require all registered medical practitioners to prepare a professional development plan (PDP) that is relevant to their scope of practice for each CPD period.

b) All CPD homes should assist their practitioners with the process of professional development planning as required.

c) The MBA should provide general guidance about professional development plans for CPD.

4. Type and amount of CPD

a) All registered medical practitioners must complete at least 50 hours of CPD per year.

b) Practitioners must allocate their 50 hours of annual CPD proportionally across each of the three types of CPD, as follows:

- at least 25 per cent of the minimum CPD required annually should be 'validated educational activities'
- at least 25 per cent of the minimum CPD required annually should 'review performance'
- at least 25 per cent of the minimum CPD required annually should 'measure outcomes', and
- the remaining 25 per cent of the minimum CPD can be distributed across any types of CPD.

c) The structure and content of CPD programs must be based on contemporary evidence and best practice.

5. Ensuring equitable access to diverse CPD programs relevant to practitioners' scope of practice

a) The MBA should no longer recognise self-directed CPD undertaken outside an accredited CPD program.

b) All accredited CPD programs (including those provided by specialist medical colleges) must provide access to their CPD standards and programs to all practitioners whose scope of practice is relevant (i.e. college programs should not be restricted to fellows of that college).

c) The MBA should enable the establishment of new CPD programs in addition to those provided by specialist medical colleges.

d) Accredited CPD programs should be sufficiently flexible to recognise legitimate workplace-based CPD activities.

6. Practitioners who do not provide direct patient care

a) Accredited CPD programs should cater for practitioners who do not provide direct patient care, and include support for them to measure their outcomes and review their performance.

7. Supporting improved access to relevant data-sets

a) To facilitate doctors' measuring outcomes, the MBA should lead the active engagement of stakeholders including the holders of 'large data' sources (such as Medicare, health departments, hospitals and clinical registries), Primary Health Networks and electronic medical records software companies to find ways to provide all doctors with ready access good quality individual, team and comparative data.

8. Improving career transition support

a) Accredited CPD programs should offer general strategies and encourage or enable

access to specific educational opportunities to help medical practitioners actively manage career transitions (when there is a change in their scope of practice) and their transition to retirement.

9. The role of healthcare consumers

a) The MBA should work with consumer groups to publicise and promote their processes for ensuring that doctors are up to date and fit to practise, and how their input is used to promote safety and quality of care.

10. Supporting system change: Implementation and transition

a) The MBA should review and amend the *Continuing professional development* registration standard to reflect the recommendations in this report.

b) The MBA should plan for a transition period to enable the implementation of these recommendations.

c) Employers should support quality CPD by enabling in-house education, peer review processes and in providing data-rich environments that support the assessment of performance and improvement of patient outcomes.

Recommendations for managing the risk of poor performance

Risk from individual characteristics

11. Age related risk

The MBA has the power to make changes that will strengthen public safety by better managing age related risk.

a) Subject to the provisions of the National Law and other relevant Commonwealth, state and territory laws, the MBA should:
   - require doctors at 70 years and every three years thereafter to undertake a confidential health check by a suitably qualified medical practitioner, including cognitive screening using a prescribed validated screening tool
   - require doctors at 70 years and every three years thereafter to undertake a formal managed performance review process with feedback, with credit for CPD, and
   - provide guidance on the requirements for the health and performance screenings, including the processes for dealing with the outcomes.

b) CPD providers, medical indemnity insurers and employers should:
   - promote annual health checks for later career doctors
   - work closely and constructively with medical practitioners over the age of 70:
     - to raise awareness of potential risks that may affect performance and improve supports for safe clinical practice, and
     - to increase supports for later career doctors considering and, where appropriate, managing changes to their scope of practice or transition to retirement, including providing written guidance, CPD education activities and the use of 'retirement ambassadors' to provide peer role models of successful retirement planning for doctors.

c) The MBA should:
   - commission an independent research group to receive, de-identify and analyse data on participant demographics (e.g. age, gender, practice environment, type and extent of patient care, notifications and complaints history and CPD) and outcomes of the health and performance screening processes for doctors over 70 years
   - rigorously evaluate outcomes for the utility of this approach in detecting performance or health concerns that may influence fitness to practise (including seeking feedback from participating medical practitioners their CPD providers and any remediation providers), and undertake a cost-benefit analysis.

d) If there are insurmountable legal obstacles to taking mandatory actions to investigate and address the potential risk from doctors over 70, as a minimum the MBA should commission further research to examine the risk of poor performance from doctors in this age group. This may include voluntary participation in appropriate pilot studies that reflect the above criteria and further collaborative research efforts investigating risks shown by notifications and complaints data for older doctors.

12. Risk indicated by multiple complaints

The MBA should:

a) interrogate the notifications data it holds about doctors with multiple notifications, to identify patterns of potential underperformance and poor performance and clarify the points at which risk to the public is occurring, including investigating the number, type and frequency of performance complaints and the corresponding levels of risk

b) increase system responses to practitioners with multiple complaints and or notifications by requiring practitioners with three or more substantiated notifications and/or complaints over a five-year period, to undertake additional assessments to investigate the potential risks to the public. This should include input from others involved in, or with knowledge of, the practitioners' performance to determine if there are specific performance issues and/or broader undetected performance risks that need to be addressed

c) develop MOUs with relevant organisations may assist in information sharing about complaints or potential risks

d) improve the coding systems in datasets held by AHPRA and health complaints entities to enable targeted research and greater insight, through consistent and accurate categorisation of complaints and notifications

e) systematically evaluate the outcomes from these increased system responses to:
   - characterise the different types of performance-related complaints and their level of risk
   - identify hotspots of risk that need to be more fully or differently addressed, and
   - consider whether three substantiated complaints over a five-year period is the appropriate threshold for closer scrutiny or assessment.

Risk from practice context

13. Professionally isolated practitioners

The MBA should work with providers of accredited CPD programs and other stakeholders to develop agreed indicators about the hallmarks and risks from practice context, including professional isolation and/or lack of collegial supports and:

a) provide clear guidance to the profession about identifying and managing risk from professional isolation

b) encourage doctors who meet the agreed indicators for professional isolation to direct the 25 per cent of unallocated CPD activities within their minimum CPD requirements towards managing identified risk from practice context. This should emphasise peer activities such as performance review, peer reviews, peer visits, formal and informal clinical networking, mentoring, other forms of increased collegial supports and outcomes measurement.

Risk from health systems and culture

14. Underdeveloped and fragmented systems for the early identification and effective management of underperformance

The MBA should work with jurisdictions, employers, and medical indemnity insurers to address underdeveloped and fragmented systems for the early identification and effective local management of underperformance including:

a) facilitating cross-agency collaborations to encourage the existing and emerging champions of change in stepped early detection and performance improvement processes

b) evaluating new programs to identify exemplar processes

c) enabling further pilot projects to be trialled in systems likely to be successful. This is likely to initially include institutions with sufficient resources to implement pilots within existing robust clinical governance programs

d) longer term diffusion of successfully developed models and trialling of models in smaller or different systems, and

e) developing processes relevant to practitioners who do not work for employers or in larger group practice arrangements.

15. Barriers to inter-agency information sharing about risk

a) The MBA should establish MOUs on processes to facilitate and strengthen robust information sharing about performance concerns or issues between relevant agencies and stakeholders to create a joined up system that facilitates early intervention for at-risk practitioners.

16. Poor professional behaviours of early career doctors are not fully addressed

The MBA should:

a) continue to alert stakeholders to the future risk to patient safety from early poor professionalism and remind:
   - Medical Deans Australia and New Zealand and Universities Australia about the future risk to patient safety from graduating medical students with a proven and irremediable lack of professionalism and as needed, of their duty to strengthen teaching about professionalism and if necessary preclude entry to the profession of individuals who are unfit to practise.
   - colleges, post-graduate training providers and employers about the future risk to patient safety from trainees and early and established career doctors who demonstrate poor professionalism and do not respond to remediation or other educational interventions and as needed, of their duty to preclude from the

profession individuals who are unfit to practise.

b) undertake further work to investigate the quality of professionalism education, supports for successful professional identity formation and the implications of underperformance in barrier examinations on the type and risk of future notifications and complaints.

17. Variable structures for remediation and patchy access for practitioners

The MBA should:

a) lead work, in partnership with other stakeholders, to develop a shared understanding of the roles and responsibilities of employers, colleges and other health sector stakeholders for identifying issues and managing remediation, and

b) work with stakeholders to identify the best model for ensuring effective, supportive and equitably accessible remediation opportunities in Australia, including identifying the role of the MBA and examining the current model for the Doctors' Health Service Pty Ltd – which is funded by the MBA – as a national framework that is run at arms-length from the Board.

18. Barriers to accessing patient outcome data for improving safety and quality

a) To assist in improving safety and quality, the MBA should lead the active engagement of a diverse group of stakeholders including the Australian Commission on Safety and Quality in Health Care (ACSQHC), holders of 'large data' sources (such as Medicare, health departments, hospitals and clinical registries), Primary Health Networks and electronic medical records software companies to find ways to create and share good quality individual, team and comparative data.

Part B: Context

The following section provides the context for this report. It includes the role of medical regulation in Australia, the status of revalidation around the world, outlines the consultation process we undertook in developing this report and gives an account of what we learned from it.

Introduction

The Medical Board of Australia (MBA or 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 MBA is one of 14 National Boards in the National Registration and Accreditation Scheme (National Scheme). The National Scheme is governed by the National Law.

Protecting the public is the primary principle guiding the MBA's work. The National Law empowers the MBA 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 (UK), 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 MBA has consulted with the profession and the community about options for revalidation in Australia and has commissioned international research.

The MBA is now considering how best to ensure the 110,000 medical practitioners in Australia maintain and enhance their professional skills and knowledge and remain fit to practise medicine.

In developing this report, the Expert Advisory Group (EAG), appointed by the MBA to provide technical advice on options for revalidation in Australia, has considered international evidence, available Australian data and feedback to its interim report.

Revalidation

Background to revalidation in Australia

The MBA started a conversation about revalidation in Australia in 2012. The MBA consulted with the profession and the community and commissioned international research into revalidation options for Australia. The MBA Chair, Dr Joanna Flynn AM, 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.*[5]

In September 2015, the MBA published research commissioned from the Collaboration for the Advancement of Medical Education Research and Assessment (CAMERA) on revalidation and announced the next steps.[6] The CAMERA 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 MBA's consideration. The full report *The evidence and options for medical revalidation in the Australian context* is available on the MBA's website.[7]

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

- appointing a Revalidation 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. The terms of reference and membership of the EAG is shown at Appendices C and D and is available on the MBA website.[8]

- appointing a consultative committee to provide feedback on issues related to the proposed introduction of revalidation in Australia. The terms of reference and membership of the Consultative Committee is shown at Appendix E and are available on the MBA website.[9] The committee was chaired by the Chair of the Medical Board of Australia.
- 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 MBA published the results of the social research on its website in November 2016.[10] [11]

The MBA has ruled out a UK-style revalidation and made it clear that doctors will not be required to re-sit their fellowship exams every five years. The MBA asked the EAG to recommend one or more models for revalidation in Australia and to provide advice on how these can be piloted and evaluated.

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.*[12]

The purpose of revalidation in Australia

The fundamental purpose of revalidation is to ensure public safety in healthcare through doctors practising in Australia doing efficient, effective, contemporary, evidence-based CPD and by proactively identifying doctors who are either performing poorly or are at risk of performing poorly, assessing their performance and when appropriate, supporting remediation of their practice.

Recent commentators have also pointed to the importance of separating out thinking about how to improve each of these aspects. 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.*[13]

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 that is provided by the majority of competent doctors.[14]

Speaking at the conference of the International Association of Medical Regulatory Authorities (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.[15]

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 (US), some provinces in Canada and in New Zealand. The way revalidation works in each jurisdiction differs, but all aim to ensure doctors remain up to date, can demonstrate they are fit to practise in their chosen field and are able to provide a suitable level of care.

The CAMERA report identified and analysed international examples of revalidation.[16] Consistent with the EAG's terms of reference this section does not replicate existing work. Further information about international examples of revalidation is detailed in the CAMERA report are available on the MBA's website.[17]

The General Medical Council (GMC) has completed a review of revalidation in the UK.[18] In it, the independent reviewer, Sir Keith Pearson, points out the importance of measuring and evaluating the impact of revalidation.

Consultation on the EAG's interim report

The focus of the 2016 consultation on revalidation was to develop a practical and effective pathway that will help keep doctors competent and up to date throughout their working lives.

An essential 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'*.[19]

In developing its interim report, the EAG was mindful of the particularly importance that any potential approach to revalidation in the Australian context is designed specifically for the Australian health system. It recognised that 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, with a clear purpose essential for any future revalidation system.

Guiding principles

Consistent with the intent of the MBA, the EAG recommended the following guiding principles apply to all potential approaches:

- smarter not harder: strengthened CPD should increase value and effectiveness
- 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.

What we consulted on

The EAG released its interim report on 16 August 2016.[20] The interim report laid out the evidence and recommended a model that combines strengthened CPD and the proactive identification and assessment of at-risk and poorly performing practitioners. The MBA undertook a wide-ranging consultation on the EAG's proposal.

The EAG's interim report proposed a two-part approach to revalidation, consisting of:

- maintaining and enhancing the performance of all doctors practising in Australia through efficient, effective, contemporary, evidence-based CPD relevant to their scope of practice ('strengthened CPD'), and
- proactively identifying doctors at risk of poor performance and those who are already performing poorly, assessing their performance and when appropriate supporting the remediation of their practice.

Who we consulted with

During the three and a half month consultation, hundreds of doctors, their representatives, community members and educators shared their ideas. They gave feedback on the proposal put forward by the MBA's EAG on what we should do to build a system for revalidation in Australia that is tailored to our health care context, and is practical, effective and evidence-based.

During the consultation we:

- received 116 submissions (listed in Appendix A and published online[21])
- met with all specialist medical colleges, the Council of Presidents of Medical Colleges (CPMC) and the Australian Medical Association (AMA) (listed in Appendix B)
- held forums in each state and territory, attended by more than 400 stakeholders (listed in Appendix B)
- heard from more than 1,000 doctors and community members in our online discussion forum (published online[22]) and our online survey, and
- met three times with the Consultative Committee established to provide feedback on issues related to the introduction of revalidation in Australia (terms of reference in Appendix E).

In addition, the *Medical Journal of Australia* (MJA) published a perspective from Medical Board Chair, Dr Joanna Flynn on revalidation,[23] along with a podcast.[24]

What we heard

There were a number of general themes that emerged from the consultation, including:

- wide support for improving standards and managing risk to patients, through strengthened CPD
- most specialist colleges are already in the process of strengthening their CPD programs, but there is variation between colleges in the types of CPD currently offered (that is, the balance of educational activities, outcome measurement and performance review activities)

- wide support for maintaining the supportive, educational and standards-focused role of specialist colleges
- general support for new CPD providers
- the proposal to identify and manage at-risk and already poorly performing practitioners was more contentious, with some individuals unconvinced there is a problem to be solved
- wide support for better information and data sharing between health sector agencies, and demand for role clarity to prevent double-handling and confusion of responsibilities
- a need for improved processes that offer remediation and support for individual practitioners to return to safe practice, outside of the regulatory framework, and
- widespread concern that any new process should not increase the administrative burden on practitioners without demonstrable improvements in patient safety.

Developing the final report of the EAG

Following the consultation, the EAG analysed the submissions and other feedback from the consultation process. The EAG met on a number of occasions to review the submissions and comments and finalise its recommendations. This report represents the final views of the EAG.

Part C: The evidence for change

Strengthening continuing professional development

Introduction

World-wide, CPD is one of the cornerstones of revalidation. CPD aims to ensure that doctors maintain and enhance their professional knowledge, skills and behaviours throughout their working lives.

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, where individual doctors must be able to demonstrate that they have met relevant standards and are fit to practise.

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.*[25]

Current CPD arrangements in Australia and New Zealand

CPD represents a model for continuous improvement and therefore quality improvement in healthcare that has evolved significantly in Australia. CPD is a mandatory requirement of registration for all doctors in Australia and New Zealand.

The MBA's registration standard for CPD allows doctors to participate in the CPD program of specialist medical college(s) relevant to their specialty or undertake self-directed activities according to the published standards. Currently, all specialist medical colleges have defined requirements and models that are relevant to the scope of practice of their members. The Australian Medical Council (AMC) accredits colleges for all their activities, according to published standards.[26]

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 MBA 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

A snapshot of the profession in Australia

Australia's 110,000 medical practitioners can be clustered into five broad groups in relation to CPD.

The groups are medical practitioners with:

- specialist registration who participate in structured college CPD programs
- general registration who participate in a relevant structured college CPD program
- specialist registration who undertake self-directed CPD activities that meet college requirements
- general registration who undertake self-directed CPD activities, and
- 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 per cent) of medical practitioners hold specialist registration and are therefore required to meet the requirements of a specialist medical college CPD program.

Under current Australian regulatory requirements, all individuals in training or under supervision, will progress to one of the other categories over a fixed period. The EAG believes that the structured training and supervision in

place for this group is adequate to protect patients, monitor and as needed address the performance of individual practitioners. This group is therefore not addressed further in this report.

CPD Registration standard

The MBA 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. The revised standard, effective from 1 October 2016 is available on the MBA's website (www.medicalboard.gov.au/Registration-Standards).

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

Medical practitioners who have specialist registration:

- 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 fulfil the CPD requirements of more than one specialist college or specialty, and
- can only choose a self-directed program of CPD if that program meets the requirements for CPD set by the relevant specialist medical college.

Medical practitioners with both general and specialist registration are only required to complete the CPD requirements set by the relevant specialist college.

Medical practitioners who are Australian or New Zealand medical graduates and have provisional registration to undertake an accredited intern year must:

- participate in the supervised training and education programs associated with their position, and
- comply with any further requirements for training or supervised practice specified in guidelines issued from time-to-time by the MBA.

Medical practitioners who are IMGs and have provisional registration must:

- if in an accredited intern position:
  - participate in the supervised training and education programs associated with their position
- if not in an accredited intern position:
  - complete CPD activities as agreed in their supervision plan and work performance report, and
  - 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
- comply with any further requirements for training or supervised practice specified in guidelines issued from time to time by the MBA.

Medical practitioners who have general registration and are prevocational trainees or college vocational trainees must:

- participate in the supervised training and education programs associated with their position, and
- comply with any further requirements for training or supervised practice specified in guidelines issued from time-to-time by the MBA.

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:

- complete CPD activities as agreed in their supervision plan and work performance report
- 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
- comply with any further requirements for training or supervised practice specified in guidelines issued from time-to-time by the MBA.

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

- 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

- 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 CPD 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 MBA's registration standards provide for CPD programs that meet AMC accreditation requirements and also meet the MBA'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.[27] 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 MBA 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.[28]

Medical colleges work to ensure that doctors who participate in their CPD programs are meeting their requirements in typical ways, such as logging points, providing reminders and opportunities to attain points in required areas and supporting doctors who have not met the requirements to do so.

In addition, the MBA 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.[29]

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).[30]

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'*.[31]

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 (VEAB) 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 a colleague (i.e. through a 'collegial relationship' with a doctor who holds vocational registration in that area of medicine).

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 continuing medical education (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 practising certificate application form each year, and
- if audited, doctors must provide forms signed by their colleague, and evidence of completed MCNZ forms to show that they are meeting the MCNZ recertification requirements.[32]

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.[33]

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).[34] 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:

- Vocational scope: The MCNZ is encouraging Branch Advisory Bodies 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.
- 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 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
- RPR includes multi-source feedback (MSF)
- 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, and
- 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 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:

- 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 personal development plan.
- 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.
- 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.[35]

The MCNZ audits 15 per cent of doctors annually to check doctors' compliance with their professional development and recertification requirements.

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 should include review of what they actually do in their contemporary practice.[36]

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.[37 38]

Since the 1970s, the concept of continuing post-graduate education to 'facilitate the full performance of practitioners in the diverse practice of professional work'[39] 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.[40] Kaufman summarised his principles as follows:

- adults are independent and self-directing
- they have accumulated a great deal of experience, which is a rich resource for learning
- they value learning that integrates with the demands of their everyday life
- they are more interested in immediate, problem-centred approaches than in subject-centred ones, and
- they are more motivated to learn by internal drivers than by external ones.[41]

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

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

> *... the ability to be methodical and disciplined; logical and analytical; collaborative and interdependent; curious, open, creative, and motivated; persistent and responsible; confident and competent at learning; and reflective and self-aware (p. 213).*[42]

Donald Schön was instrumental in developing the concept of reflective practice.[43] He proposed two main components of reflection: 'reflection in action', which occurs during an unexpected event, and 'reflection on action', which occurs after an event. The latter includes analysing the event/s behaviours/activities and determining what alternative strategies could have resulted in a better outcome.

Kaufmann integrates these three approaches to thinking about learning in his *principles to guide educational practice (abridged p. 215)*[44]:

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

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

education and the consequences for physician performance and patient healthcare outcomes.

Bloom investigated the effects of continuing education on physician clinical care and healthcare outcomes.[45]

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

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

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

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

Cervero and Gaines[46] 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.[47] They concluded that CPD:

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

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

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

When standards for mandatory CPD require little more than documentation of attendance for the purpose of certification, registration or credentialing, the effectiveness of the activities undertaken are variable. Moore et al. pointed out that in recent years there has been a steadily increasing discomfort about this uncertainty. The MBA has already responded to this by moving to a more specific description of CPD that involves hours and specifies a mandatory 'practice-based reflective element' for doctors holding general registration.[48]

McMahon discusses how accredited CPD organisations have evolved substantially to meet these challenges over the last 15 years.[49] He points out that although educational planners increasingly construct activities related to adult learning theories and practice needs, much of this evolution is not visible to the learner. The example that he gives is that in the US, of the more than 140,000 learning activities offered by accredited organisations under the umbrella of the Accreditation Council for Continuing Medical Education (ACCME), approximately 60 per cent are designed to achieve improvements in physician performance, with 40 per cent of these courses measuring subsequent change. A further 30 per cent of the courses are designed to improve patient outcomes, with 13 per cent of courses measuring those changes.[50] Despite such developments in providing more sophisticated and evidence-based CPD, McMahon has argued that there is still room for more flexibility and innovation in CPD, so it meets both practice-based needs and quality improvement of healthcare.

Cervero and Gaines have contended that the current status of research demonstrates how to

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

They summarise the status of the literature, as follows:

> *... we now have 39 systematic reviews that present an evidence-based approach to designing CME so that it is more likely to achieve the outcomes of improved physician performance and patient health outcomes. With this significant evidence-base about CME effectiveness, in tandem with numerous reports of practical strategies for effective CME, reforming the landscape of CME is less about what we know of its effectiveness and more about a political problem of changing the systems of which CME is an important constituent element. (p. 136)* [51]

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)*[52]

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

Kopelow proposes that current knowledge provides an important message for planners and regulators of CPD.[53] In this regard, the essential process is to design the evidence-based features of the educational interventions that are specifically and deliberately devised to bring about a change in clinician performance in their scope of practice.

There is an increased focus internationally on the role of a professional development plan (PDP) in guiding doctors to emphasise the relevance of their current and future practice demands and quality in assessing needs and planning their CPD activities. Self-assessment is critical to this process but a literature review has shown that, while suboptimal in quality, the preponderance of evidence suggests that physicians have a limited ability to self-assess accurately.[54] The authors therefore proposed that the processes currently used to undertake professional development and evaluate competence need to focus more on the results of external assessment. Examples include feedback from peer review, evaluation of outcomes based activities and high quality data based on standards.[55]

Lockyer et al. studied how doctors inform their self-assessment. They found that doctors use and interpret data and standards of varying quality as a basis for self-assessment. They concluded that doctors may benefit from regular and routine feedback and guidance on how to seek out data for self-assessment.[56]

Sargent et al. however have proposed that informed self-assessment is characterised by multiple tensions.[57] Mann et al. have studied the tensions that exist when informed self-assessment is used. In a qualitative study, they found that participants at all levels of medical training and practice experienced multiple tensions in informed self-assessment. Three categories of tensions emerged: within people (e.g. wanting feedback, yet fearing disconfirming feedback), between people (e.g. providing genuine feedback yet wanting to preserve relationships), and in the learning/practice environment (e.g. engaging in authentic self-assessment activities versus 'playing the evaluation game'). Multiple tensions, requiring ongoing negotiation and renegotiation, are inherent in informed self-assessment. They concluded that 'tensions are both intra-individual and inter-individual and they are culturally situated, reflecting both professional and institutional influences'.[58] This study emphasises the importance of leadership by CPD program providers in helping establish a culture and practice of informed self-assessment for professional development planning.

Identification of individual professional development needs should also take into account the knowledge of the doctor, the stage of progression in their career, their work requirements and other factors that can

influence practise including risks and supports.[59] A written professional development plan (PDP) helps ensure that medical practitioners reflect on the value and appropriateness of proposed CPD activities before and after undertaking them. The PDP process for CPD is conceptualised as informed self-assessment taking into account all factors that may influence doctors' fitness to practise.

Strengthening continuing professional development: a conceptual model

In considering the assessment of doctors' performance at work, Klass[60] distinguished three relevant conceptual groupings within the 'umbrella' of CPD:

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

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

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

Undertaking educational activities

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

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

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

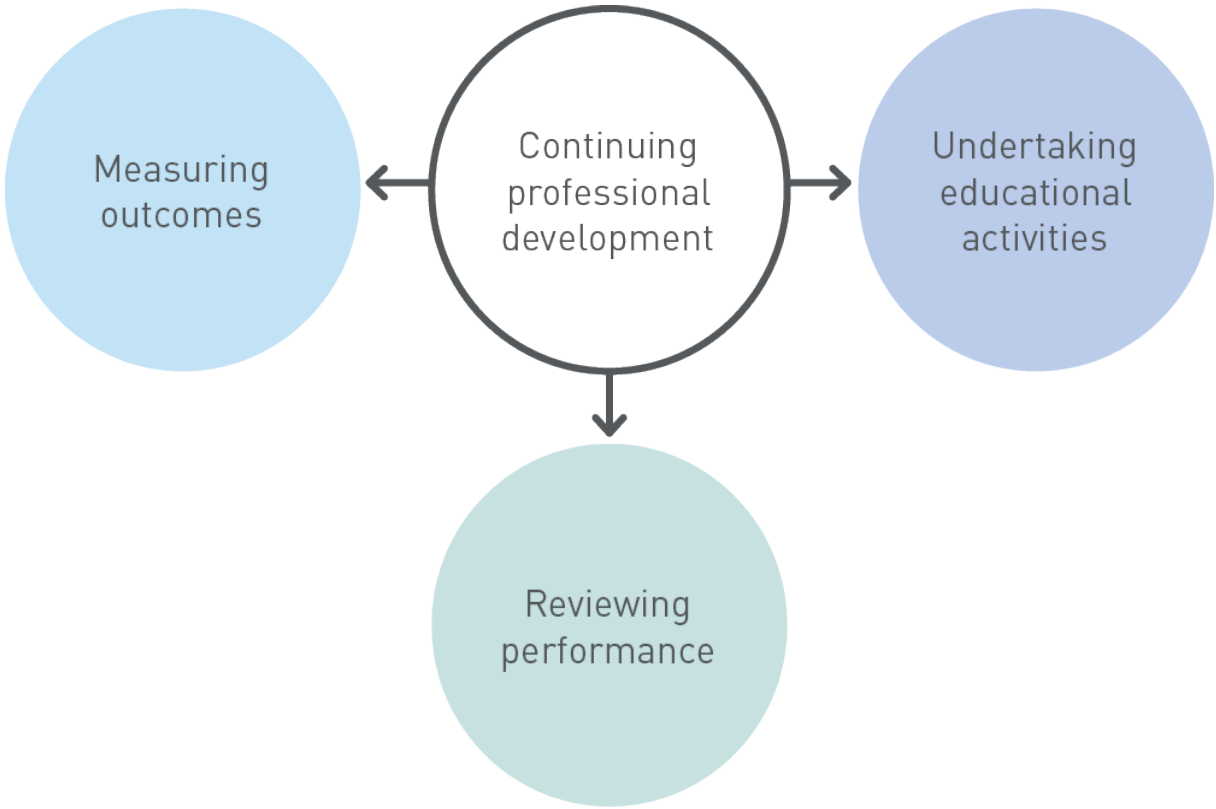

Figure 2: A conceptual model (Adapted from Klass 2007)

Online learning

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

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

Casebeer et al. conducted an important randomised controlled study of the effectiveness of 114 online CPD activities in US doctors.[61] They assessed the evidence-based decisions made in response to clinical case presentations by physicians participating in online CME activities of various formats and compared those decisions with those of a similar group of physicians who did not participate in the CPD activities. The CPD online formats included case-based, multimedia and interactive text.

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

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

The authors concluded that their findings were consistent with a recent meta-analysis[62], demonstrating that internet-based CPD improved participant knowledge, skills, and practice decisions, compared with no intervention and obtained outcomes that were comparable to those obtained after participation in traditional or face-to-face CPD activities.

Reviewing performance

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

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

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

Medical record review

Medical record (chart) review and discussions with peers based on the medical record (chart) have been used for many years to assess clinical performance. It has been shown in a study of randomly selected doctors in Quebec that peer ratings based on chart review alone achieve moderate levels of reliability but that some important information about quality of care is missed when only chart review is used compared to adding a discussion of aspects of the charts with the doctor concerned.[63]

The same group has published a more recent and useful study that directly addressed the optimal number of patient charts for an acceptably reliable assessment of general practitioners. Four professional peer assessors independently reviewed 15 patient charts for each of a group of 20 practising doctors. Statistical analysis showed that as few as 10 patient charts are sufficient for any assessor to obtain a reliable result. This suggests that generalisable assessments by a peer reviewer could be obtained in a relatively short time-frame, consistent with a task that could be performed during a practice visit.[64]

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.[65] [66] 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.[67]

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.[68] 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.[69] Continuing work on developing agreed clinical standards for index conditions, such as used in the CareTrack study[70] will provide explicit criteria to assist reviewers when assessing records and assist doctors in preparation for peer review.

Experience of medical record review in Canadian regulatory authorities

Canadian regulatory authorities have significant experience in the peer review of medical records in the doctor's surgery both as a CPD tool and as a method for early detection of performance issues. The peer review approaches used by medical regulatory authorities in Canada are detailed on pages 41 - 43.

Multi-source feedback

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

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

MSF for educational purposes

MSF is based on surveys that are usually completed by three separate groups: colleagues, co-workers and patients. The doctor self-reviews at the same time, and compares their self-reflection with their actual results and usually the comparative results of peers. In many cases, the technique is accompanied by externally facilitated feedback. This process is seen as a positive way of driving CPD.[71]

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

- colleagues who know about the doctor's practice
- co-workers (e.g. nurses, allied healthcare professionals or health-related administrative staff), and
- patients.[72]

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.[73]

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

While self-directed learning is a central plank of CPD, Davis et al., in a systematic review of the accuracy of physician self-assessment compared with observed measures of competence, concluded that the weight of the evidence suggests that doctors have a limited ability to accurately self-assess.[74] They proposed that the processes currently used to undertake CPD and evaluate competence may need to focus more on external assessment. Ferguson et al. in their systematic review of MSF found that higher levels of behaviour change are achieved through facilitated feedback.[75] 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.[76] The strongest effects have been found in studies where performance was evaluated and feedback given over longer periods of time.[77] 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.[78]

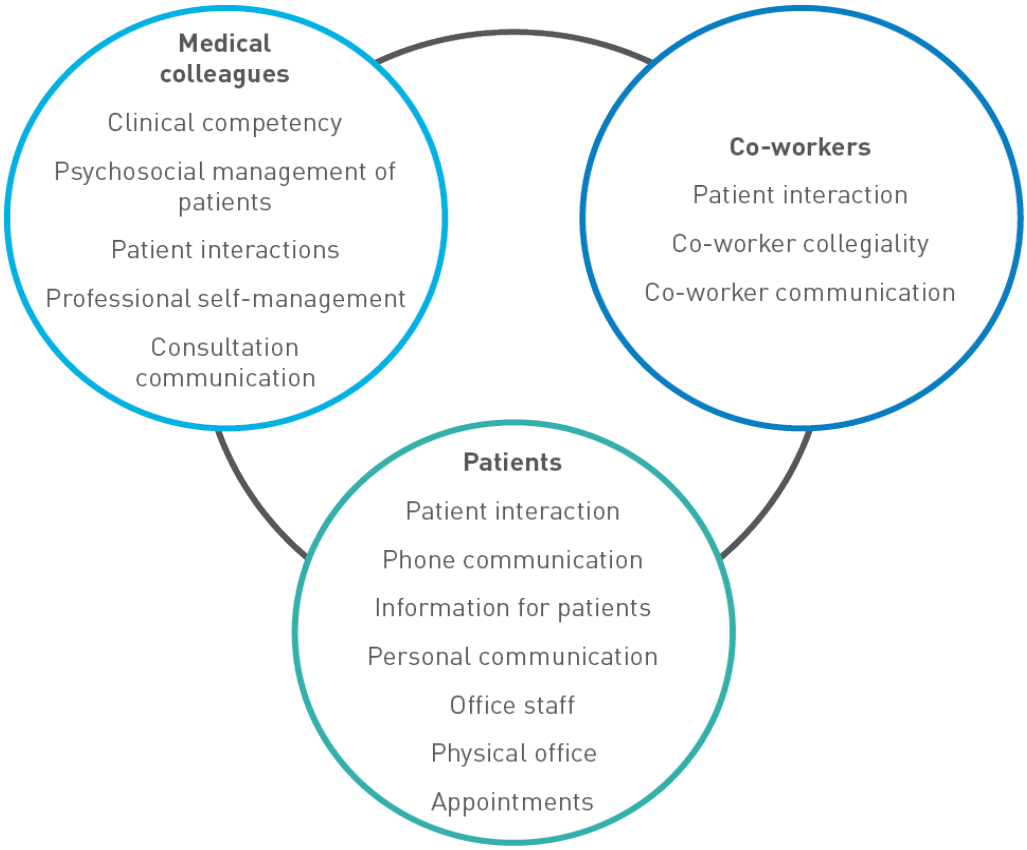

Figure 3: Attributes assessed by MSF assessor groups[79]

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.[80] Lockyer proposed that MSF is not a replacement for audit when clinical outcomes need to be assessed. However, when interpersonal, communication, professionalism, or teamwork behaviours need to be assessed and guidance given, it is one of the better tools that may be adopted and implemented to provide feedback and guide performance.[81 82]

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).[83 84] Slightly lower reliabilities were obtained from a similar study of anaesthetists.[85]

In the UK, Campbell et al. have investigated the utility of the GMC patient and colleague MSF questionnaires in assessing the professional performance of a large sample of UK doctors in a range of UK clinical practice settings.[86] 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.[87], 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).[88]

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.[89] [90] 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.[91]

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

It should be noted that in MSF, differences have been found between responses according to respondents' background characteristics or context. Wilkinson et al., in a large study of MSF applied to UK doctors in training, showed that there were small differences in ratings associated with various colleague characteristics viz., different genders gave different mean scores, with male and female raters giving mean scores of 7.78 and 7.97, respectively. [92] These score differences, while fairly small, were statistically significant. There were also some relatively small differences according to the background of the rater. Similarly Wright et al., in a UK study, found that co-workers who had more contact with the individual doctor were also more likely to provide more favourable feedback.[93] While these differences appear small, it is therefore not advisable to use MSF as the sole measure of a doctor's performance in practice. Despite this caution, MSF is feasible and cost-effective, has high reliability with small numbers of respondents, demonstrates validity and is capable of assessing important broad competencies that are difficult to otherwise assess, such as communication, interpersonal skills and teamwork, professionalism and collegiality.

The Council of Academic Hospitals of Ontario (CAHO), while not a regulatory authority, has also reported that member hospitals are 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 are provided confidentially by the department head. The individual doctor sees their own results compared with de-identified peers, and a threshold score.[94]

MSF for regulatory screening purposes

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

Alberta

In 1999, the College of Physicians and Surgeons of Alberta (CPSA) originally developed and standardised the longstanding process known as the PAR – which was a MSF program for family physicians.[95]

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

The CPSA then developed and implemented specialty-specific PAR programs for a wide range of specialties such as surgeons, paediatricians, anaesthetists and IMGs. Results from implementation of each set of these PAR tools have been published in peer reviewed journals.[96]

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

These numbers have been validated by research,[97] [98] although some authors have suggested that 25 patients may be insufficient.

PAR covered five physician attributes:

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

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

Alberta's PAR program was an integral component of the Alberta College's revalidation strategy. The process primarily focused on practice quality and educational processes rather than a search for underperformance. However, about four per cent of the total group were further assessed including a formal peer review of their practice based on their results.[99] The peer review process employed, included a practice visit, with direct observation and medical record (chart) review and a process of 'Chart Stimulated Recall' (a discussion based on the doctor's own patient records) and included one doctor visiting the practice. A specialist familiar with the physician's type of practice conducted visits for surgeons, medical specialists and anaesthetists.

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

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

Since 2017, the CPSA's original PAR process has now been superseded and replaced by a mandatory five yearly process MSF+, using a broader range of tools for competency assessment including a professional development plan, a revised MSF approach (MCC360)[100], and peer review or audit.[101] The new process is described further on page 67.

Nova Scotia

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

A standard PPR-NS peer review will include:

- an on-site visit, assessing and providing feedback on a physician's practice facility, processes and procedures, documentation and patient care
- a discussion of the various risk and supportive factors, unique in profile to each physician's practice, which may influence long-term quality, and
- a review of the physician's approach to practice improvement, introducing strategies for linking professional development to potential gaps in practice.[102]

Off-site peer review may be offered in lieu of on-site review where doctors whose practice profiles include multiple 'protective factors' i.e. those known to promote quality in practice. The concepts of risk and supports are discussed further on page 53. The CPSNS expects this delineation to direct its resources where they may be most needed, i.e. a risk-based approach.

In addition, there is a reflective approach to the CPD component where participants are asked to consider their approach to CPD and to then adopt best practices for quality improvement in their individual practice environment.[103] The overall program outcomes are described as 'directive when necessary', so that in limited circumstances, such as a review uncovering a safety issue, the program can direct a doctor to take certain actions to improve their practice.

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

Manitoba

In 2011, Manitoba adopted the PAR process. Beginning in 2011, all Manitoba physicians who have practised medicine in the province for at least three years were required to participate in, i.e. make themselves available for – the Manitoba PAR (MPAR) process about once every seven years. Once selected, physicians must, by law, complete the MPAR assessment. Each year, approximately 14 per cent of Manitoba physicians are surveyed.[104] It is reported that approximately 10 per cent of assessed physicians may require or request further practice improvement and/or professional development assistance based on the findings of their MPAR assessment. This assistance could take the form of a telephone interview and/or a peer review practice visit.[105]

British Columbia

In British Columbia, the College of Physicians and Surgeons (CPSBC) has a long-standing program known as the Physician Practice Enhancement Program (PPEP). The assessment process begins with a pre-visit questionnaire followed first by a MSF process based on the PAR tool. A Peer Practice Assessment (PPA) of recorded care and finally an office assessment follow this.[106]

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

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

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

Measuring outcomes

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

Audit and feedback

Audit and feedback form a common approach to assessing and evaluating changes based on patient outcomes. Reflective practice encompasses collecting patient outcome data, reflection on practice and review of feedback from peers, colleagues and co-workers. It provides an opportunity to improve both practitioner and unit/team/organisational practice.[107 108 109]

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.[110] The main aim of clinical audit is to measure how well something is done rigorously and to provide feedback to improve local clinical care.[111]

Some studies have found that clinical audit with feedback is effective in changing physician care and patient outcomes.[112 113] However, the practice of audit and feedback in healthcare professional practice has not consistently been found to be effective.

Ivers et al. have conducted a large Cochrane systematic review of 140 studies, to help explain the variability in performance changes and types of audit and feedback for health practitioners.[114] 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.[115] [116] The most common identified barriers to the effectiveness of audit in improving care are:

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

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

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

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

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

Audit has the potential to be a beneficial form of CPD, if organisational support and sufficient resources are in place. Further research is necessary to determine whether and how clinical audit is more effective if combined with other interventions.[117]

Strengthened CPD

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

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

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

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

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

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

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

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

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

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

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

Proactive management of risk from practitioner performance

An essential 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'.[118]

Background

Jurisdiction and functions of key agencies

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 MBA (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 MBA. 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*.[119]

Figure 4 (adapted from Bismark et al.[120]) demonstrates the relationship and remit of these agencies.

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.[121]

One of the ways in which the MBA 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.[122]

The word 'notification' is deliberate and reflects that the MBA 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.

Studies of risks and supports that may affect doctors' performance

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.

Donaldson estimated that over a five-year period, as many as six per cent of British doctors could raise concerns serious enough to warrant consideration of disciplinary action.[123] 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.

	Civil courts	Health complaints entities (commissions)	Health practitioner regulators[2]
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

Figure 4: Jurisdiction and functions of key agencies with responsibility for medico-legal matters in Australia

[2] Includes the Medical Board of Australia, the Medical Council of New South Wales and Queensland's Office of the Health Ombudsman.

Donaldson et al. later conducted a large observational study using data collected by the independent National Clinical Assessment Service (NCAS)[124] in the UK for each formal referral for performance concerns (n=6179 doctors) over an 11-year period (2001–2012). The annual referral rate was five per 1,000 doctors.[125]

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.[126]

Williams recently estimated a six to 12 per cent rate of the former among US physicians.[127] 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.

In the current multi-level evaluation study of the UK revalidation system interim report (2016),[128] 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. 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 the doctors appraised. Concerns were most frequently raised about the doctors' lack of reflective practice (45.5 per cent).

Wenghofer et al. studied 532 general practitioners randomly selected for College of Physicians and Surgeons of Ontario (CPSO) peer assessments conducted between 1997 and 2000.[129] The majority (78 per cent) of these physicians had satisfactory practices; whereas 14.1 per cent required a reassessment and 7.9 per cent required an interview because of concerns about quality of care. In 2017, the CPSO reported that seven per cent of all doctors subject to their mandatory peer assessment processes were not considered satisfactory, requiring further action.[130] The CPSO processes are described further below.

A conceptual approach to managing risk and improving supports in a regulatory framework

International literature and practice concerning the management of risks that may affect doctors' performance now shows that there are a number of identifiable and significant risks to patient safety from medical practitioners at risk of poor performance that are amenable to intervention. Conversely, factors that support doctors' practice are also being increasingly recognised.

Risk

A recent review conducted for Canadian regulators identified hundreds of articles concerning issues of risk, a detailed account of which is beyond the scope of this paper.[131]

A system level solution has been called for to identify those doctors whose performance fails to meet expected standards of care or consistently falters.[132] Although personal and professional characteristics are important, Wenghofer et al. have proposed that doctors' performance is also influenced by many other factors.[133] They conclude that:

> *Employing a conceptual framework that considers physician performance within a broader environmental construct will allow us to develop better processes of performance evaluation, to design appropriate interventions and to support performance improvement and governance models for individuals, teams and systems.*

From a systems perspective, the EAG also proposes that individual, contextual and collective health system factors are all influential. Further, it should be recognised that risk may arise from one factor or from a complex interplay of factors, including both risks and supports.

Not all risk factors such as age are directly modifiable, however attention to all factors individually and collectively has the potential to improve health care quality in Australia.

This report draws on literature and practice, and the consultation feedback to conceptualise the most pressing and potentially modifiable areas for regulatory action on risk in three categories as follows:

Individual characteristics

a) Physician age/length of time in practice
b) Medical practitioners who are the subject of multiple complaints or notifications

Practice contexts

a) Professionally isolated practitioners who lack peer supports

Health systems and culture

a) Underdeveloped and fragmented systems for the early identification and effective management of underperformance
b) Barriers to inter-agency information sharing about risk
c) Poor professional behaviours in doctors are not fully addressed
d) Variable structures for remediation and patchy access for practitioners
e) Barriers to accessing patient outcome data for CPD focussed on improving quality and safety.

Associations of risk with individual characteristics

Individual characteristics including age/length of medical career, gender and cognition are well recognised in the literature as potential risk factors for performance. Age and length of time in practice are strongly correlated, and most research articles therefore denote this factor as age only so this will be adopted for the present discussion.

Ageing and cognition

The Australian population is ageing. Between 1995 and 2015, the proportion of people aged 65 years and over increased from 11.9 per cent to 15 per cent.[134] In March 2017, in Australia, there were 5,596 registered medical practitioners aged 70 years and over and 865 aged 80 years and over, who are registered to practise medicine.[135]

The *World Alzheimer's report* 2015 summary shows the regional crude estimate of dementia prevalence in people aged 60 years and over now in Australasia is 6.7 per cent.[136] Dementia is the single greatest cause of disability in Australians aged 65 years or older.[137] Research published by the Alzheimer's Association Australia indicates that 20 per cent of women over the age of 65 and 17 per cent of men over the age of 65 will develop dementia.[138]

Ageing practitioners may be affected by different age related sensory and neurocognitive changes,[139] [140] including a decline in processing speed, reduced problem-solving ability and fluid intelligence, impaired hearing and sight, and reduced manual dexterity. This parallels the changes in the general population.[141] Normal cognitive ageing involves a decline in fluid intelligence beginning in the middle adult years, whereas crystallized intelligence tends to remain stable.[142]

In medicine, Durning et al. call attention to the importance of both crystallised and fluid intelligence in enabling accurate clinical decision-making. Crystallised intelligence is the cumulative information acquired throughout life and includes professional expertise and wisdom. Fluid intelligence is the capacity to process information and reason, which is critical to analysing and solving novel or complex problems. Because of decline in fluid intelligence, adults in their 70s typically take about twice as long to process the same tasks as adults in their 20s.[143]

Lee and Weston discussed the role of experience therefore becoming a 'double-edged sword', providing increasingly efficient diagnostic skill involving pattern recognition, while countered by age related decline in analytic reasoning skills.[144] They cite an early study of older doctors with competency concerns where they have found prevalent errors of non-comprehensive history taking, incomplete data gathering and interpretation, and deficient hypothesis generation.[145]

Concern arises from studies that demonstrate that more than a third of physicians with identified competency concerns have moderate to severe cognitive impairment.[146] Regarding cognitive functioning, Kataria and colleagues[147] examined the performance assessments and cognitive function in 109 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).[148] 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 (15 per cent) 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 in this study was 46 years old. Many were working in isolation indicating a lack of professional/peer supports. They called for increased vigilance for cognitive impairment.

It is difficult to relate the precise degree of neurocognitive loss to physician competence because the actual levels of cognitive impairment that preclude safe practice have not yet been determined. There are yet no agreed guidelines to help medical boards decide what level of cognitive impairment in a doctor may put the public at risk.[149] Screening tests may require further investigation when impairment is suspected. However, LoboPrabhu et al. raise the question of whether age should be considered as a risk factor that merits special screening for adequate cognitive functioning.[150]

Unfortunately, studies also demonstrate that physicians have limited ability to self-assess competence[151] and this could be compounded by a lack of awareness of decline in their cognitive performance.[152] It is possible therefore that some doctors might have difficulty recognising limitations of their standards of care[153] or knowing when to cease practice.[154]

Older doctors might have decreased practice performance. They may have decreased clinical knowledge, adhere less often to standards of appropriate treatment, and perform worse on process measures of health care quality in relation to diagnosis, screening, and preventive care.[155] They may have had variable levels and quality of CPD over their careers.[156] A large recent study also found an association of age with reduced patient outcomes (higher 30 day mortality), especially for low-volume practice.[157]

Older doctors represent a valuable asset to the medical profession and some studies have demonstrated that physicians under 65 years can perform at or near the level of their younger peers. Drag et al. found that on computerised tasks, 78 per cent of surgeons between 60 and 64 years of age performed at equivalent standard to younger colleagues, while this dropped to 38 per cent of those 70 and older.[158] Older doctors make a significant clinical workforce contribution, as well as undertaking many essential roles including educating, mentoring and supervising.[159]

The effect of age on any individual doctor's competence can be highly variable and the reasons for this are likely multifactorial.[160] [161] Competence and health, rather than mandatory retirement due to age per se, should be the deciding factors regarding whether physicians should be able to continue their practice.[162] Deterioration in health from any cause should be recognised so that the ramifications can be managed proactively.

While cognitive function is clearly a risk factor, it should not be interpreted in isolation from other factors that may contribute to a risk from underperformance.[163] Many factors other than age and health may also contribute positively to a doctor's level of competence. These include supports such as intelligence and engagement in self-directed learning and deliberate practice to maintain expertise; patient factors such as acuity of the illness and complexity of the problem; and practice factors such as time pressures, hours worked, shift work, on-call, and robust organisational support and governance systems.[164] [165] Eva has proposed that:

> *Evidence from the medical education literature and psychological theory suggest the importance of increased environmental supports, decreased time demands, and peer review programs as barriers against the impact of aging. The implications of these findings include the potential to tailor continuing education (and physician remediation) efforts toward the age-related abilities/deficiencies of individual physicians.*[166]

Team composition plays a role. Aiken et al. have reported that differences in nursing education and staffing are associated with mortality and other patient outcomes independent of physicians' qualifications.[167]

Late career planning and transition to retirement

Lee[168] questioned:

> *Should older doctors be forced to retire? Clearly, age should not be the only determinant. It remains a challenge for regulatory bodies to determine the appropriate physician, practice, and patient factors that, in combination, determine an individual physician's ability to practise safely. There are currently various provincial physician assessment and enhancement programs that target older practising physicians*[169]*. A constructive, proactive*

approach that balances patient safety with the rights of physicians who have provided a lifetime of dedicated service to their communities is required. Systemic changes that will allow dignified retirement for physicians diagnosed with Mild Cognitive Impairment or dementia are needed.

In Australia, there is no mandatory retirement age for doctors. The total number of doctors over 65 years of age has increased by 80 per cent since 2004,[170] [171] consistent with the baby boomer generation. Since Schofield and Beard reported on the effects of this generation in medical practitioners in 2005,[172] the medical workforce has continued to age.

For example, the RACS reported in 2013 that 19 per cent of its fellows were over the age of 65[173] and currently 11 per cent of all registered medical practitioners are over the age of 65 and 5.8 per cent are over the age of 70.

Many doctors are reluctant to retire. Wijeratne and colleagues have just reported a cross-sectional self-report survey of doctors aged 55 or more, using a commercial database rented from the Australasian Medical Publishing Company (AMPCo). In all, 62 per cent of 1048 respondents (17.5 per cent response rate) intended to retire, 11.4 per cent had no intention of retiring and 26.6 per cent were unsure.[174]

Clinicians with adequate financial resources and greater anxiety about ageing were more likely to have firm retirement plans; while international medical graduates, clinicians with greater 'work centrality' and greater emotional resources, were less likely to have retirement plans in place.[175]

In a model including medical specialty as a variable, being a psychiatrist (aOR, 0.40; 95% CI, 0.20–0.79) or general practitioner (aOR, 0.54; 95% CI, 0.34–0.87) were associated with reduced odds of intending to retire.

The authors suggest that their findings are relevant to developing education and support programs for assisting late career medical practitioners to transition to retirement. They propose that specific programs should be provided as part of CPD programs through the medical colleges.

They recommend that CPD programs should include general strategies concerning financial and emotional resources as well as recognising the role of work as part of a medical professional's self-identity. Specific CPD programs also may assist older doctors to gradually step down from practice by progressively reducing work hours, modifying their responsibilities, developing new interests, and eventually retiring altogether.[176]

Existing examples such as the RACS *The surgical career transitions guide* is an online resource that highlights issues relating to all career stages, and links to relevant educational opportunities. In addition, the RACS enables CPD participants to self-select from five practice types including clinical consulting practice only and surgical assisting or other non-consulting practice, with tailored CPD requirements according to scope of practice, at any career stage including at a late career stage. The RACS position paper, *Senior surgeons in active practice*, supports annual health checks for senior surgeons. Another example is the *Welfare of anaesthetists* special interest group position statement that provides guidance on retirement and later career options for the older anaesthetist.[177]

Collectively, colleges could increase assistance by enabling access to peer 'retirement ambassadors' as role models for effective retirement and including educational interventions regarding career planning and transitions in CPD programs.

Lillis and Milligan emphasise the important role of employers in career transitions. Employers may find it difficult to raise age as an independent issue due to perceived legal constraints.[178] Nonetheless, employers can play a valuable role in their employment and credentialing processes including formalised transition to retirement plans, adapting workload, case mix complexity, after-hours work and solo practice, providing extra peer support, an assigned colleague/mentor, longer appointment times and more flexible working hours. Similarly, medical indemnity insurers may provide a substantial and confidential form of support for effective transitions to retirement. In addition, effective use of superannuation planning is valuable in assisting doctors to be in a strong financial position for retirement.

Pesiah et al. sum up the beneficial future approaches to effective retirement in Australia:

...educating the medical community, encouraging early notification and facilitating career planning and timely retirement of older doctors. This will have benefits both in protecting the public as well

as preventing an undignified and humiliating end to often-unblemished careers in medicine. [179]

Individual risks demonstrated in regulatory studies

Khalik and colleagues 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.[180] 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 GMC[181] reported that 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.

Donaldson et al.[182] conducted a large observational study using data collected by the independent NCAS[183] 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 study of complaints against GPs to the Danish Patient Complaints Board has identified that, for complaints about 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).[184]

Considering gender associations with risk, as had been flagged in a number of previous studies, Unwin et al. 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.[185] 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).

Elkin et al. studied the influence of country of qualification on risk profiles in two states in Australia.[186] 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 disciplinary 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 comparing results of AMC IMG examination performance data with the regulatory datasets held by AHPRA will assist understanding of future approaches.

Supports

In considering the issues of the older doctors as cited above, authors have promoted a whole of system approach to risk that includes deliberate emphasis on supports.

Every doctor's risk and support profile is individual. Better understanding of the nature of risks and supports with deliberate action on manageable risk factors can help to mitigate risk and assist safe practice. Risks from age and health have been detailed above.

The CPSNS has recently published a guide for doctors *Guidance on risk and supportive factors in medical practice*.[187]

In reference to older practitioners, the guide draws attention to mitigating strategies of particular relevance to the older physician that may include:

- paying particular attention to your physical and mental well-being
- reducing the pace of practice
- allowing more time for decision making, particularly in uncertain circumstances
- avoiding practice environments with a high degree of diagnostic uncertainty, e.g. episodic or emergency care
- avoiding shift work, particularly night shifts, whenever possible
- reducing practice scope to focus on areas of strength and familiarity
- employing memory aids, algorithms and point-of-care resources
- wherever possible, working and interacting clinically with capable colleagues and learners
- making specific additional efforts to stay current through CPD, and
- supports for doctors who work in collegially unsupported contexts include a deliberate attention to peer engagement through change in work practices and CPD.

Associations of risk with multiple complaints

Australian and international studies show that a few medical practitioners who attract multiple complaints, notifications or malpractice claims have a very high probability of incurring further such complaints. This represents a potential risk to public safety.

Frequency and representativeness of patient complaints

In 2006, a large study 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 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)*[188]

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.

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 advised 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)*[189]

It is prudent when considering complaints in a regulatory context to restrict actions on complaints to those that have been substantiated.

Characteristics of doctors at high risk of multiple complaints

In the UK, the GMC has been working on developing their understanding of doctors at risk. They reported that doctors with previous complaints are at greater risk of future complaints – that is, doctors who received two or more complaints during the six year period from 2007–2012 were seven times more likely to receive a complaint that required investigation in 2013.[190]

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.[191] 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.

Bismark et al. have since performed a much larger study examining the distribution 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.[192] 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 per cent 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 or professionalism 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 per cent 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.[193]

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.[194] [195] [196] [197]

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, there is a compelling argument to focus on proactive interventions addressing doctors with multiple complaints. This should assist the doctor to reduce risk of further complaints and improve patient safety in a cost-effective manner. This would be especially valuable in doctors at higher levels of risk. Interventions with doctors at high risk of subsequent complaints are essential to better understanding of the nature and gravity of the problems, the level of risk, and the effectiveness of interventions to reduce risk of further complaints.

There is also a need for existing large-scale studies to be replicated and developed further. Studies should address the ability to identify Australian doctors at the highest levels of risk in different large-scale datasets and using different methodologies. The nature of the complaints and their severity and relationship to underperformance needs to be further elucidated. It is essential to develop our understanding by examining datasets such as from larger hospitals with risk-management data as well as the continuing studies on large regulatory datasets within AHPRA.

In addition, continued sharing of information between HCEs and the MBA is essential as complainants may access either HCEs or the MBA or both.

Spittal et al. 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.[198] 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. They advocated this as 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 knowledge about risk from frequent complaints 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.[199] 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 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; and a planned analysis of practitioners who receive notifications for sexual boundary violations. These studies will provide further insights and support for regulatory decision-making concerning risk.

Similar findings about the concentration of risk in small groups of doctors have been replicated in the US. Studdert et al. have recently 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. [200]

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. Figure 5 is reproduced from the study.

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)	

Variable	Hazard ratio (95% CI)*	P value
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**

Figure 5: Variables associated with recurrent paid malpractice claims among physicians with one or more paid claims[201]

Notes

* 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 US.

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 counselling, 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)*

Associations of risk with contextual characteristics

Contextual factors have been studied including the relationship of quality CPD, professional isolation and patient workload to assessed performance. Goulet et al. have reported a retrospective study of the link between the quantity and quality of CPD activities completed by family physicians (GPs) in Quebec and the quality of their practice, based on data collected during Peer Inspection Visits (PIV), conducted by the regulator (see also below). Three groups were created from among Quebec family physicians who had received a PIV between 1998 and 2005.[202]

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 supportive 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 (indicating isolation from peers) 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 positively correlated with the quality of professional practice by family physicians.

Wenghofer et al.[203] in their study of 532 general practitioners randomly selected for CPSO Peer Assessments tested the effects of several specific variables related to organisational factors and found that some had significant effects on performance. Practice type (walk-in or episodic care versus continuity of care), number of patient visits per week and holding an active hospital appointment each had varying effects on different aspects of clinical care. For example, physicians working in walk-in clinics performed less well in chronic care. The most consistent organisational effects were found with patient visits per week, where performance in all five

dimensions improved with declining numbers of patient visits. Holding a hospital appointment was correlated with better quality of the medical record.

Lewkonia et al. studied the practice visit reports of visits to 51 family physicians and GPs who participated in PAR during the period 2010 to 2011 in Alberta and whose ratings in one or more major assessment domains were significantly lower than their peer group.[204] Areas of particular concern included problems arising from practice isolation where there was limited access to collegial networks and diagnostic conclusions being reached with incomplete clinical evidence.

These studies identify potential risks from professional isolation from peer engagement, low levels of CPD and quality of practice. Professional isolation is not a function of geographic location but rather the absence or limitation of regular interactions with medical colleagues, trainees and students, in everyday work.

Interactions with competent peers, whether formal or informal, are an important way to reflect on and discuss patient care. Conversely, the absence of regular professional interaction creates an environment in which a good practice may over time stagnate, become outdated or be unsupported and failure to meet accepted standards may go unrecognised.

Health systems and culture

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, medical staff members 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 that 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. Patients or their families, other clinicians or staff in the health service or occasionally external clinicians may make these concerns or complaints. Generally such concerns or complaints will come to the attention of health service senior administrative staff, 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 in the organisation. Most commonly, heads of department or the DMS, or both in collaboration, manage serious concerns or complaints.

Often these concerns or complaints are isolated complaints such as those relating to a single episode of unprofessional behaviour, lack of accountability, a single clinical care adverse event or poor communication. However there are occasions when a pattern suggesting risk is detected and this will be 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, when the events have serious patient consequences as required by the mandatory reporting provisions. However, more commonly the health service will work with the doctor to develop a process of improvement or 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 locally.

There are also some instances when the pattern suggesting risk 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/or the doctor will leave but continue to work at other health services.

However, when there is a pattern suggesting risk or an actual adverse event it could indicate as yet not fully identified performance concerns that may result in ongoing risk to patient safety.

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.

In primary care settings, the type and effectiveness of clinical governance is variable and less clear.

System approaches to early identification and management of underperformance

Despite the processes described, it is clear that Australia lacks robust systems and approaches for the early identification of risk.

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. 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.[205]

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 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. strongly advocated for patients' roles in helping to promote safety and reduce risk in several ways.[206] 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, 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 behaviours. 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)*[207]

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 US. 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. These findings emphasise that supportive factors for risk reduction may include practising in robust clinical governance systems with peer engagement, and receptiveness to feedback.

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-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
- stepped intervention approaches reserve directly assessing doctors' performance in practice for the highest risk groups or for non-responders to peer feedback, and
- some doctors do not respond to stepped interventions.

In Australia recent initiatives have emerged using the same early intervention principles. In St Vincent's Hospital, for example, the *Inspired to Shine Ethos Program* is built on the principles developed by the Vanderbilt Centre for Patient and Professional Advocacy, described above (see footnote 212). Ethos focuses on unprofessional behaviours and the culture of rewarding professionalism role models. The CEO describes it as follows:

> *The Ethos program recognises the proven link between poor behaviours and adverse patient outcomes and is focused on building a culture of safety for our patients and staff. I see the Ethos Program as an enabler of our organisation delivering person centred care with an outstanding patient and resident experience and the best possible health outcomes. The program will bring together an electronic reporting system, an accountability framework and a comprehensive peer training initiative which will focus on prevention and early intervention.*[208]

Other health care organisations are also adopting these approaches including Royal Melbourne Hospital, Lady Cilento Children's Hospital and the Sydney Adventist Hospital.[209]

Relationship of medical training, professionalism issues and examination performance to complaints

Medical training outcomes have been linked to complaints to medical regulators

Tamblyn et al. 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 (over 17 per cent) were retained after investigation. [210]

Of these physicians, most complaints (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. Communication scores on a licensing test predicted future patient complaints especially among the lowest-scoring test-takers. In addition, clinical decision-making scores correlated with patient complaints. The authors suggest improving assessment of these skills, integrating their assessment into earlier stages of training, and investigating successful means of remediating deficiencies in these areas.

Physicians must pass the United States Medical Licensing Examination (USMLE) to obtain an unrestricted license to practise medicine in the US. Little is known, however, about how well USMLE performance relates to physician outcomes in later practice. The authors of a 2017 study[211] examined the relationship of USMLE scores to the odds of receiving a disciplinary action from a U.S. state medical board.

Controlling for multiple factors, the authors used non-nested multilevel logistic regression analyses to estimate the relationships between scores and receiving an action. The sample included 164,725 physicians who graduated from US MD-granting medical schools between 1994 and 2006. Physicians had a mean Step 1 score of 214 (standard deviation [SD] = 21) and a mean Step 2 Clinical Knowledge (CK) score of 213 (SD = 23). Of the physicians, 2,205 (1.3%) received at least one action. Physicians with higher Step 2 CK scores had lower odds of receiving an action. A 1-SD increase in Step 2 CK scores corresponded to a decrease in the chance of disciplinary action by roughly 25% (odds ratio = 0.75; 95% CI = 0.70-0.80). After accounting for Step 2 CK scores, Step 1 scores were unrelated to the odds of receiving an action.

Results demonstrate that USMLE Step 2 CK scores provide useful information about the odds a physician will receive an official sanction for problematic practice behaviour later in their career. These results suggest that doctors should be aware of any deficiencies suggested by their performance scores in high stakes tests even if they pass overall. Equally low passes in such examinations expose the doctor to higher risk if future complaints.

A negative association has also been reported, after accounting for other factors, between USMLE Step 2 CK scores and patient mortality for US physicians who attended international medical schools.[212]

Professionalism

The MBA has identified the standards of behaviour – or professionalism - inherent in professional practice.[3] Hills and Griggs provided a literature review concerning professionalism and the role of professions and medical professional organisations. Their analysis was as follows:

> *A key outcome has been the recognition that medical professionalism must be actively taught and assessed. Substantial effort is required to improve the educational environment, so that it nurtures the development of professionalism within the work-place. Although medical colleges have been prominent in identifying and progressing the recent developments within professionalism there is still much to be done to deliver fully on the societal contract between the public and the profession. There are key gaps to address, particularly with regards to self-regulation, civil behaviour and effective leadership and advocacy.*
>
> *Medical colleges need to take direct responsibility for the professionalism of their members. The expectations of the community are increasingly clear in this regard.*[213]

[3] See *Professionalism* in the glossary

While the above article concentrated on practising doctors, the public is also at risk if poor professional performance by medical students or early career doctors is not satisfactorily addressed. Professionalism is as important as clinical knowledge and skills in the training of doctors for excellence in care. Despite its importance, enhancing positive professional identity formation and associated behaviours remains an educational challenge.[214] Because unprofessional behaviour of practising doctors is associated with unprofessional behaviour evident in medical school, identifying these adverse behaviours in medical school is critical.[215] Researchers have however documented the difficulty in assessing and acting upon such unwanted behaviour.[216] Related to this issue is role modelling of unprofessional behaviours by senior faculty.[217]

Poor professionalism among medical students and recent graduates is recognised in the international literature as an indicator of future unprofessional performance by registered medical practitioners[218] and therefore also represents a demonstrable future risk to patient safety.

Unprofessional performance can create risks to the public that should be addressed early during undergraduate medical education. Demonstrated appropriate professional behaviours should be a mandatory requirement for graduation, given it is now a requirement of the current accreditation standards of the AMC for medical education programs. While standards have been enhanced, it will take some time for the training to respond. The AMC has recently upgraded its various standards and published detailed guidance relating to professionalism in medical students, interns and doctors in training.[219]

Lack of professionalism is also recognised as extremely difficult deficit to address and as such, preventing unfit students from entering the profession and unfit trainees from becoming specialists has an important role in protecting future patients from harm. Further development of curricula and advocacy for necessary action is necessary to improve the ability of educational institutions to address these challenges.

Educational interventions relating to underperforming practitioners

Educational interventions for underperforming doctors are often called remediation. The term remediation may be associated with negative connotations, whereas principles associated with early return to competent practice should be supportive and educational in nature, non-punitive, and feature self reflection and constructive feedback on strategies for performance enhancement. Other terms are in use including 'enhanced learning support' or 'enhanced professional support'. For the purposes of this report we use the established term remediation, meaning the above principles.

Many practitioners who are identified as underperforming will return to safe practice simply through the process of being assessed, receiving and acting independently on feedback. Where this does not occur, more formal avenues are required to promote successful outcomes. This is inherent in a stepped approach retaining professional responsibility for self-improvement and activities that are anticipatory and preventive.

Deliberate remediation processes where necessary are best seen as individualised and educational approaches 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.

In the context of efforts to improve early detection and management of underperformance, consequent remediation strategies are necessary and quality and effectiveness of these interventions is paramount. Remediation of physicians who are not performing up to acceptable standards is central to quality care and patient safety.[220]

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.

Remediation should also be tailored to the nature and level of the risk and educational needs. The current knowledge-base about remediation processes and outcomes in the

literature is unfortunately not as well developed as knowledge about performance assessment processes,[221] [222] 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. However some studies have suggested that a very small group of doctors may not respond to remediation.

Lillis et al. studied remediation outcomes in New Zealand doctors, reporting outcomes for 24 consecutive doctors required to undergo remediation by the MCNZ. Of 24 doctors who underwent initial assessment, five failed to engage with remediation and withdrew from clinical work. All remaining 19 doctors completed a 12-month education remediation program. Of these, 13 were considered to be practising at an acceptable standard at the end of remediation on the basis of sequential supervisor reports. Six doctors were required to have a second performance assessment. Of these, only one was considered to be functioning at an acceptable standard. Concurrent health concerns were common among this cohort of doctors. The authors concluded that the majority of doctors who entered remedial education attained acceptable standards at the end of remediation similar to other findings.

However some doctors appeared to be unresponsive to remediation.[223] This was also found by Hanna et al. who showed that after a three-year remedial program consisting of individualised review, ongoing small-group and evidence-based discussions, simulated patients and role playing, formal chart review, and peer review, five doctors were re-assessed. Only one doctor improved; another remained the same, and three deteriorated.[224]

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 to improve relevance and success. Hauer et al. have found that 'There is an urgent need for multi-institutional, outcomes-based research strategies for remediation of less than fully competent trainees and physicians with the use of long-term follow-up to determine the impact on future performance'. [225]

In 2007, a multi-national survey including a focus on remediation of underperformance was undertaken by Kings College London.[226] 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.[227]

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)*:

- performance problems, including clinical competence and capability issues, should normally be managed locally wherever possible
- local processes need to be strengthened to avoid performance problems wherever possible, and to reduce their severity at the point of identification
- the capacity of staff within organisations to deal with performance concerns needs to be increased with access to necessary external expertise as required
- 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
- the medical royal colleges to produce guidance and provide assessment and specialist input into remediation programs, and
- all those involved in training and assessment need to assure their assessment processes so that any problems arising during training are addressed.

In Australia many stakeholders are, or may be, involved in remediation, including:

- accredited colleges and related specialty societies
- other accredited CPD providers
- universities
- employers
- jurisdictions
- medical indemnity insurers
- regulators
- health complaints entities
- training programs (e.g. GP regional training providers)
- private providers
- rural workforce agencies
- Primary Health Networks (PHNs), and
- doctors' health advisory services (psychological support).

Overall, Australia is in a similar position to many other countries. Despite many stakeholders with interest in improving or who are already engaging in remediation, remediation activities and enhanced learning support lacks cohesive engagement and structure. This is necessary to ensure the approach to remediation of doctors is more accessible, learner centred, supportive and is of consistently high quality.

Barriers to accessing patient outcome data for improving quality and safety

Data reporting both patient outcomes and patient experience can be a powerful driver of clinical improvement, and system quality assurance.[228] Such data are especially valuable when risk adjusted for co-morbidities and presented in comparison to clinical peers. These data provide an objective way to review clinical performance for individuals and teams.

Routinely collected administrative data can give insights into team performance such as reports concerning 30 day mortality for a number of high risk hospitalisations including acute myocardial infarction, stroke and pneumonia care.[229]

Many craft groups have established important clinical quality registries that measure patient outcomes and can give insights into the performance of individual doctors' and team performance for self-reflection and improvement. These registries can draw attention to differences in care outcomes or practices when different individuals and teams are compared. For example, the Victorian Prostate Registry among other measures, reports on the surgical margin around prostatectomy and has resulted in increased surgical margin with improved patient outcome and longer remission.[230]

However, while some disciplines and institutions have quite sophisticated and accessible sources of patient outcome data, for others even accessing simple data is time consuming and difficult.

For doctors to analyse and then improve their patients' outcomes, they must first agree with their colleagues, the community and patients on

what clinical and patient reported outcomes are important, and establish which aspects of this are already collected within the existing administrative datasets or medical record systems. Existing sources include Medicare Benefits Schedule (MBS), Pharmaceutical Benefits Scheme (PBS), inpatient data, maternity data collection, Australian Institute of Health and Welfare (AIHW) and Australian Bureau of Statistics reports, jurisdictional electronic medical records, primary care electronic medical records, myHealthRecord and private health insurance data. Analysing these sources can give valuable insights into a doctor's/team outcomes. An example is the RACS surgical variance report.[231]

Similarly, the ACSQHC Atlas of Healthcare Variation maps geographic variation in the use of medicines and interventions, giving insights into the variable performance of services across Australia.[232] Mapping variation is an invaluable tool for understanding how our healthcare system is providing care. The Atlas series illuminates variation by mapping use of health care according to where people live. While variation is associated with underlying differences in the health of specific populations, the ACSQHC concludes that the 'weight of evidence in Australia and internationally suggests that much of the variation documented in the Atlas is likely to be unwarranted. Understanding this variation is critical to improving the quality, value and appropriateness of health care'. CPD plays an essential role in helping doctors to work on unwanted sources of variation once they become known.

As discussed above, while audit plays an important role in CPD currently, there are significant gaps in the ready availability of data to support individual clinicians' audit activities in many specialties. Australian doctors need better access to high-quality data, and reports need to be available to the doctors, their patients and the community. Initiatives to improve measurement of clinical outcome need to be fully recognised in the CPD process. Much of the needed data can only be obtained by new collections, using either audit or through the establishment of a clinical quality registry.

Guidance on clinical quality registries,[233] patient reported outcome measures (PROMs),[234] [235] patient reported experience measures (PREMs)[236] and suggested datasets for specific conditions are available for the Australian and international context.[237]

A whole of system approach is needed to improve access to data for clinicians' CPD and for quality and safety initiatives to reach their full potential to improve care.

Proactive screening for underperformance by regulators

Increasingly, international regulatory bodies have responded to the early or proactive identification of risk by mandating random or directed screening interventions to provide quality peer-mediated feedback to the majority of well performing doctors and also to help find out whether any doctors may be underperforming.

MSF processes have been described above on pages 39 - 43. In addition, direct peer review methods have been extensively used in some jurisdictions.

Ontario

The peer and practice assessment program of the College of Physicians and Surgeons of Ontario (CPSO) Canada has been operational since 1980 and thousands of physicians have been assessed. A six-year study showed that physicians who received a peer review performed better six years later than a group of physicians assessed for the first time.[238] New initiatives other Canadian jurisdictions, for example in Nova Scotia and Alberta, have now also introduced peer review processes.

In Ontario, the College of Physicians and Surgeons (CPSO) randomly selects members each year to undergo a program called 'peer and practice assessment'.[239] 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 every 10 years.

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. The College also may select members for assessment in support of approved research or for identification of other factors for which an assessment would be beneficial.

After a pre-visit questionnaire and a MSF process (based on the PAR), assessors are

assigned. Assessors are peers carefully selected to match the assessed physician's practice. They conduct a review of the doctor's medical records at the practice, 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 about a half-day and has recently gone through a period of redesign to ensure that the indicators of quality care and effective documentation are more transparent and enable better preparation for the process.

In 2016, it was reported that 87 per cent of randomly chosen doctors were found to be practising in a satisfactory manner and received useful feedback from their assessor.[240] Despite the mandatory nature of peer review once selected, surveys have indicated that about 80 per cent of doctors find the process educational. About seven per cent of doctors may be referred for further investigation in a stepped approach after the peer review report. Further investigations may include direct observation of the doctor with patients to elucidate the risk issues.

McCauley et al. studied the findings of the Peer Assessment Program in over 900 doctors. Of the 923 physicians selected, 918 were assessed and five were not assessed due to illness, withdrawal from practice and pending legal action. In 82 per cent of cases no deficiencies were found. In seven per cent of cases deficient records alone were found and 11 per cent had grossly deficient records or an unsatisfactory level of care or both (serious deficiencies). Among the total group of GPs, statistically significant associations in performance were found for various factors including older age and solo practice. In the serious deficiency group, age over 75 years was associated with a higher rate of serious deficiencies (35 per cent) in contrast to under 75 (13 per cent). [241]

Norton and Faulkner conducted a longitudinal study of 109 non-specialist physicians who had undergone two Peer Assessment Program assessments more than 10 years apart (first assessment, 1981 to 1987; second, 1991 to 1997) to investigate possible changes in performance. The mean time between assessments was 12.2 years. Grades given by the assessors declined in 70 (64.2 per cent) of cases, whereas 35 (32.1 per cent) received the same grade, and only four (3.7 per cent) had an improvement in grade, suggesting that in the majority of doctors, their overall performance declined over time.[242]

Quebec

In Quebec, another longstanding process called the professional inspection visit (PIV) also comprises a peer-assessment of the quality of a doctor's practice.[243]

Professional inspection is an obligation stipulated in the Collège des Médecins du Québec Professional Code, the law governing all professional orders in Québec.[244] The Professional Inspection Committee determines the professional inspection programs to be approved by the Board of Directors of the college.

Professional inspection programs may 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/or
- who may be professionally isolated from peers (for example 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 with a wide remit to include outcomes-based data and professional isolation 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 stepped approach.

Alberta

Participation in the Physician Achievement Review (PAR) process was mandatory for continued licensure in the Canadian province of Alberta from 2001 to 2016. The PAR process,

which is described in more detail in the section on CPD on page 41, required physicians to participate in a performance review process every five years using MSF. The process primarily focused on practice quality and educational processes rather than a search for underperformance. Members of the Physician Performance Committee (PPC), a nine-member Council-appointed group, reviewed results.

In its previous iteration, although primarily a quality-improvement program based on MSF, it was reported that about four per cent of the total participants then moved to a formal peer review of their practice on the basis of their results.[245] This peer review included 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. If the review raised concerns about performance, the doctor might then be required to undertake a more detailed assessment. This detailed assessment included but was not necessarily limited to assessments of professional knowledge and skills, communication skills, the doctor's own mental and physical health, professional ethics and practice management.

In 2017 a new competence program has replaced PAR. The new program, mandated by the Health Professions Act 2000 in Alberta, requires all doctors to complete a range of mandatory quality improvement initiatives at least every five years. This includes the 'Practice Checkup' program[246] and Individual Practice Review (IPR) and Group Practice Review (GPR) for selected or referred physicians. The new competence program states explicitly as part of its objectives that it is

> *'... intended to identify regulated members whose competence may require further assessment, practice changes and/or improvement through further education.' (p.1)* [247]

The CPSA now sets out a broad range of tools available to its Competence Committee to assess competence. These include a 'Practice Checkup', a modified MSF process, individual or group practice visits, interviews, examinations of skill, knowledge and the doctors' own physical and mental health. Further assessments are conducted if or when doctors are referred from these competence assessments or when the Competence Committee or its delegate has reasonable grounds to believe that a physician's practice is:

- exposing patients to an unacceptable risk of harm, or
- not meeting the expected standard of care.

The 'Practice Checkup is an activity based on reflection on practice and development of a personalised learning plan. Physicians will receive practice-specific reports from the college based on their registration information form and other CPSA databases, and are expected to reflect on the data, identify opportunities to improve their practice, develop a professional development plan and finally access resources and CPD activities that support quality improvement.

The IPR consists of a much broader range of range of possible requirements than the previous MSF-based approach, including any of the following activities: an onsite practice visit; a new MSF process (MCC360); practice data profiles; remote medical record audit; workplace based assessment and a practice audit.

The GPR consists of a clinic visit and follow up meeting with all doctors conducted by a trained CPSA facilitator for 90 minutes.

In 2017 this new process is being trialled for 500 doctors and 50 practices.

The effect of complaints and errors on doctors

The personal impact of medical error on health professionals can include unwanted effects on emotional wellbeing, general quality of life, and their professional practice and conduct. However this has been less well studied in the literature.[248]

Proactive management of risk is likely to reduce the stress associated with complaints and notifications for many doctors. The impact of regulatory complaints on doctors' psychological welfare and health has recently been studied in the UK.[249] 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 and 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.

Summary

Both risks and supports have been identified that may reduce or improve doctors' performance. More work remains to be done concerning improving our understanding of these factors. Nonetheless, there is sufficient evidence to justify further immediate action in a number of areas that represent hotspots of risk and are amenable to interventions. Harnessing this evidence and focusing energy and resources proportionately and proactively on hotspots of risk will help doctors' performance and reduce public harms. Our approach is set out in the Key Findings and Recommendations section.

Part D: Appendices

Appendix A: Submissions received

1	Agzarian, Marc (Dr)
2	Ali, Ishrat (Dr)
3	Anaf, Gil (Dr)
4	Aspinall, Diana
5	Australasian Association of Nuclear Medicine Specialists
6	Australasian College of Dermatologists
7	Australasian College for Emergency Medicine
8	Australian and New Zealand College of Anaesthetists
9	Australian and New Zealand Society for Vascular Surgery
10	Australian Association of Consultant Physicians
11	Australian College of Rural and Remote Medicine
12	Australian Doctors Fund
13	Australian Medical Association
14	Australian Medical Association (Queensland)
15	Australian Medicolegal College
16	Australian Orthopaedic Association
17	Australian Society of Anaesthetists
18	Avant
19	Bains, Jatinder (Dr)
20	Bell, Robert (Dr)
21	Berger, Anthony (Dr)
22	Berger, David (Dr)
23	Bhattacharayya, Ratnakar (Dr)
24	Blaj, Adina (Dr)
25	Bradbury, Christopher
26	Brown, Katherine (Professor)
27	Campbell, Diane (Dr)
28	Cardiac Society of Australia and New Zealand
29	Chan, Alexander (Dr)
30	Chapman, David (Dr)
31	Close, David (Mr)
32	Consumers Health Forum of Australia
33	Corcos, Christopher (Dr)
34	Cosmetic Physicians College of Australasia
35	Council of Presidents of Medical Colleges
36	Dahm, David
37	Dewan, Paddy (Dr)
38	Doctors Health Services Pty Ltd
39	Dodd, Elizabeth (Dr)
40	Doyle, Kevin (Dr)
41	Essali, Adib (Dr)
42	Fontaine, Mark (Dr)
43	General Practice Supervisors Australia
44	Goldman, Robert (Dr)
45	Grace, Robert (Dr)

46	Harding, Philip
47	Haywood, Ian (Dr)
48	Health Care Consumers Association
49	Health Consumers Alliance of SA
50	Hunter General Practitioners Association
51	Illesinghe, Dhushan (Dr)
52	Jaboury, Imad (Dr)
53	Jones, David (Dr)
54	Kenny Barrie (Dr)
55	Kesteven, Nathan (Dr)
56	Khan, Muhammad (Dr)
57	Krins, Tony (Dr)
58	Lockie, Patrick (Dr)
59	MB (Dr)
60	MDA National
61	Mackey, David (Professor)
62	Marshal, Tony (Dr)
63	McGovern, Mark (Dr)
64	Medical Council of NSW
65	Miocevich, Len (Dr)
66	MIGA
67	Morris, Philip (Professor)
68	Name withheld 1
69	Name withheld 2
70	Name withheld 3
71	Name withheld 4
72	Name withheld 5
73	Name withheld 6
74	Name withheld 7
75	Name withheld 8
76	Name withheld 9
77	Name withheld 10
78	National Association of Practising Psychiatrists
79	New South Wales Health
80	Noble, Phil (Dr)
81	Pain Australia
82	Patterson, William (Dr)
83	Peak, Howard (Dr)
84	Poynter, John (Dr)
85	Primary Health Care Limited
86	Radford, Peter (Dr)
87	Rae, Peter (Dr)
88	Richardson, Philip (Dr)
89	Royal Australasian College of Medical Administrators
90	Royal Australasian College of Physicians
91	Royal Australasian College of Surgeons
92	Royal Australian College of General Practitioners
93	Royal Australian and New Zealand College of Ophthalmologists
94	The Royal Australian and New Zealand College of Psychiatrists
95	The Royal Australian and New Zealand College of Psychiatrists (second submission)

96	The Royal Australian and New Zealand College of Radiologists
97	The Royal College of Pathologists of Australasia
98	Rural Health West
99	Sharma, Raj (Dr)
100	Stewart, Rebecca (Dr)
101	Thornton, William (Dr)
102	Urological Society of Australia and New Zealand
103	Walker, Thomas (Dr)
104	Warfe, Laurie (Dr)
105	Weaving, Helga (Dr)
106	Zaharias, George (Dr)

Appendix B: State and territory stakeholder forums and meetings

16 August 2016	Medical Board of Australia Revalidation Consultative Committee meeting National Stakeholder Forum
20 August 2016	AMA Federal Council, Canberra
22 August 2016	The Royal Australian and New Zealand College of Ophthalmologists Royal Australasian College of Dental Surgeons
23 August 2016	The Royal Australian and New Zealand College of Radiologists The Royal College of Pathologists of Australasia
5 September 2016	The Royal Australasian College of Medical Administrators
6 September 2016	The Royal Australian College of General Practitioners Australian and New Zealand College of Anaesthetists
7 September 2016	The Royal Australian and New Zealand College of Psychiatrists The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
8 September 2016	Royal Australasian College of Surgeons The Royal Australasian College of Physicians Australasian College for Emergency Medicine
9 September 2016	College of Intensive Care Medicine of Australia and New Zealand Australasian College of Dermatologists
27 September 2016	Australasian College of Sport and Exercise Physicians
2 November 2016	Australian College of Rural and Remote Medicine Queensland Stakeholder Forum
3 November 2016	Northern Territory Stakeholder Forum
7 November 2016	Tasmania Stakeholder Forum
10 November 2016	Committee of Presidents of Medical Colleges Victoria Stakeholder Forum
14 November 2016	Australian Capital Territory Stakeholder Forum
15 November 2016	New South Wales Stakeholder Forum
17 November 2016	Western Australian Stakeholder Forum
21 November 2016	South Australian Stakeholder Forum
6 December 2016	Medical Board of Australia Revalidation Consultative Committee meeting
19 April 2017	Medical Board of Australia Revalidation Consultative Committee meeting

Meetings were attended by

- Dr Joanna Flynn AM, Chair, Medical Board of Australia
- Professor Elizabeth Farmer, Chair, Expert Advisory Group on revalidation
- AHPRA staff

Stakeholder Forum Invitees

- Members of the State and Territory Boards of the Medical Board of Australia
- Members of the National Medical Board of Australia
- AHPRA State and Territory Managers and senior staff
- AMA Board members, CEO and Policy Advisers
- Consumers
- Departments of Health
- Medical schools
- Health Complaints Entities
- Postgraduate Medical Councils
- Specialist Colleges
- Medical indemnity insurers

Appendix C: Terms of reference of the 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 (e.g. 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 Elizabeth 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 D: Biographies of EAG members

Professor Elizabeth Farmer (Chair)

Liz Farmer is an academic general practitioner and an independent health sector consultant specializing in health professional education and assessment, research, accreditation, evaluation, revalidation and policy development. Professor Farmer is Chair of the Australian Medical Council's Prevocational Standards Accreditation Committee since 2013 and Chair of the AMC National Test Centre Research Group. In 2007, Professor Farmer was appointed as Dean of Medicine at the University of Wollongong and became the first female general practitioner to become the Dean of a medical school in Australia. Following this, Professor Farmer was the Executive Director of Workforce Innovation and Reform at Health Workforce Australia and led a national program developing policy and practice in health workforce innovation and reform for all health professionals. She is an Honorary Clinical Professor at the University of Wollongong.

Professor Richard Doherty

Richard Doherty is the Dean of the Royal Australasian College of Physicians, physician in Infectious Diseases at Monash Children's Hospital and Professor in Paediatrics at Monash University. Previous roles have been as Associate Dean for Teaching Hospitals, Head of the Department of Paediatrics at Monash, Medical Director of the Children's Program Southern Health, consultant paediatrician, Royal Children's Hospital Melbourne and Deputy Director, Macfarlane Burnet Centre for Medical Research. Professor Doherty was Chair of the Board of Examiners of the Australian Medical Council from 2007-2015. Research interests have included basic and clinical virology and he has been a supervisor of doctoral research students and specialty medical trainees. He is a member of the Commonwealth's National Medical Training Advisory Network Committee and was a member of the Expert Group for the National Intern Training Review.

Dr Robert Herkes

Robert Herkes is a highly respected senior clinician and leader in intensive care medicine, with extensive operating and leadership experience in the development, evolution and provision of critical care services at both state and national levels. Dr Herkes is the Clinical Director at the Australian Commission on Safety and Quality in Health Care providing expert clinical advice to the wide range of programs managed by the Commission. Dr Herkes has a significant role in identifying areas for synergies, partnerships and new opportunities across the Australian health sector in collaboration with all health sector stakeholders, and providing leadership and education around the latest evidence on safety and quality in health care.

Professor Michael Hollands

Michael Hollands is a General Surgeon at Westmead Hospital, and is Clinical Associate Professor of Surgery in the Western Clinical School of Sydney University. He is a Fellow of The Royal Australasian College of Surgeons. He was elected to the Council of RACS in 2006 and College President from 2012-14. He remains a member of the Executive of the Global Health Committee of the RACS and a member of the Board of the Foundation for Surgery. Professor Hollands was Chairman of the Committee of Presidents of Medical Colleges from 2013-15. Currently he is Chairman of the Healthcare Quality Committee of Western Sydney Area Health Service.

Professor Brian Jolly

Brian Jolly is the Professor of Medical Education in the School of Medicine and Public Health at the University of Newcastle and Adjunct Professor, School of Rural Medicine, University of New England. He has longstanding interests and expertise in healthcare regulation, simulation, assessment, clinical teaching, the process of feedback, clinical skills development, and research design and statistics. He is Deputy Co-Chair Medical Radiation Practitioners Accreditation Committee, the Past Chair of the Australian Society for Simulation in Healthcare (ASSH) and, in 2015, received the Australian & New Zealand Association for Health Professional Educators (ANZAHPE) Award for Outstanding Achievement. Professor Jolly is currently involved in designing and implementing the new joint medical program, a five year MD, at the Universities of Newcastle and New England.

Professor Kate Leslie AO

Kate Leslie AO is a specialist anaesthetist and head of anaesthesia research at the Royal Melbourne Hospital. She is a director of the Australian Medical Council and chair of its Specialist Education Accreditation Committee. She is a former councillor and president of the Australian and New Zealand College of Anaesthetists, and former director and chair of the Committee of Presidents of Medical Colleges. Professor Leslie has been a member or chair of several Medical Board of Australia advisory groups on specialist international medical graduate assessment and continuing professional development.

Professor Peter Procopis AM

Peter Procopis AM is a paediatric neurologist at The Children's Hospital Westmead. He has been extensively engaged in medical regulation for many years. He was appointed to the NSW Medical Board in 1999 and was Chair of the Conduct Committee shortly thereafter. In 2015 he was appointed as President of the Board. In 2010 with the advent of national registration, the NSW Medical Board was replaced by the NSW Medical Council for which he was the inaugural President and served as such until 2016. In 2010 he was also appointed as Chair of the NSW Medical Board of the Medical Board of Australia and as the practitioner member for NSW of the Medical Board of Australia. He served on the Medical Board of Australia until 2016.

Professor Procopis has been active in College activities since 1979 being President of The Australian College of Paediatrics and holding numerous offices in the RACP including Chair of the Examinations Committee and Chair of the CPD Committee during which time he led the establishment of the College's My CPD program. He continues as a member of the CPD Committee.

Professor Pauline Stanton

Pauline Stanton is Head of the School of Management in the College of Business at RMIT University. She is also an active researcher in the field of human resource management and employment relations. She has a particular interest in performance appraisal and review and much of her work has focused on the health sector. Professor Stanton is widely published with over 80 peer reviewed publications including journal articles, books and book chapters and she has been the successful recipient of two Australian Research Council grants. She has consulted and researched with a range of organisations and industries including; healthcare, defence, education, the creative arts and multinational companies, not only in Australia but also in China, Singapore, Canada, Vietnam and Mongolia.

Appendix E: Terms of reference for the Consultative Committee on the revalidation of medical practitioners

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 Consultative Committee

The Board has established the Consultative Committee to provide it with feedback on issues related to the introduction of revalidation in Australia.

Terms of reference

The Consultative Committee will:

1. provide a forum for discussion and exchange of views on what medical practitioners should do to demonstrate ongoing fitness and competence to practise
2. provide feedback to the Board on the:
    a) proposals for revalidation including whether proposed models for revalidation are feasible and acceptable
    b) proposed plan for piloting model/s of revalidation and their evaluation
    c) preferred option/s for revalidation and the implementation of any proposed revalidation activities
3. provide feedback to the Board about information and materials that are developed regarding revalidation
4. provide advice to the Board on wider consultation regarding revalidation.

Membership

The Consultative Committee includes:

Chair

- Chair of the Medical Board of Australia

Members

- Chair of the Expert Advisory Group

The Board will seek nominations from the following representative organisations:

- One nominee of the Australian Medical Council
- Three nominees of the Committee of Presidents of Medical Colleges
- Two nominees of the Australian Medical Association
- One nominee of the Deans of Medical Schools
- One nominee of the Australian Indigenous Doctors' Association
- Two nominees of the Health Workforce Principal Committee of the Australian Health Ministers' Advisory Committee – one member from a small jurisdiction and one from a larger jurisdiction
- Two nominees of AHPRA
- One nominee of the Medical Council of New South Wales

The Board will appoint:

- Two or three community members
- One or two members from Health Complaints Entities
- One member from a pre-vocational training organisation
- A person from a professional indemnity insurer

Secretariat

Strategy and Policy, Medical

Meetings and procedures

Frequency of meetings

The Consultative Committee will meet between quarterly and six-monthly.

Meetings can be:

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

Procedures for meetings

The Chair is to preside at a meeting of the Consultative Committee. In the absence of the Chair at any meeting, the Chair of the Expert Advisory Group will preside at the meeting.

Materials will be provided to members at least five days prior to day of the meeting.

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

Reporting

The Consultative Committee will report to the Medical Board and AHPRA. Communication with the Board's Expert Advisory Group will be through the Board, noting however that the Chair of that Expert Advisory Group is also a member of the Consultative Committee and will provide feedback to the Expert Advisory Group.

Payment and expenses

Community members will be paid an honorarium for their attendance and related expenses.

Other members will not be paid to attend meetings but travel and accommodation will be funded by the Board and arranged by AHPRA.

Appendix F: Glossary

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'.[250]

Continuing professional development

The Medical Board of Australia 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'.[251]

CPD program

Providers of CPD programs do more than provide CPD activities. A CPD program includes:

- details of the CPD activities needed to meet the program and MBA requirements
- CPD activities that are educationally valid, either provided within the program or by others and approved for inclusion in the CPD program
- a system and resources for participants to document their:
    - professional development plan, based on the participant's current and intended scope of practice
    - completed CPD activities
    - self-evaluation of their learning goals and achievements
- monitoring participants' compliance, compliance audits and processes for taking appropriate action for those who fail to meet the program requirements, and
- quality assurance and monitoring processes.[252]

CPD home

Each individual medical practitioner will nominate an accredited CPD program as their 'CPD home', noting that a practitioner holding registration in more than one specialty may nominate more than one 'CPD home'. The CPD home would work with each practitioner to make sure they complete their CPD requirements, including that the CPD activities are relevant to their current and intended scope of practice.

CPD activities

CPD activities maintain, develop, update and enhance the knowledge, skills and performance required for safe and appropriate contemporary practice. They are provided by a range of organisations including but not limited to specialist colleges and societies, universities, health care facilities, health consumer organisations, private training providers and conference organisers. CPD activities can include:

- continuing medical education such as courses, conferences, scholarly activities and online learning
- reviewing practice performance through activities such as peer review, multi-source feedback and performance appraisal, and
- measuring practice outcomes such as clinical audits and comparison of individual outcomes with larger datasets.[253]

More detailed examples of CPD activities are included in Figure 1.

Colleagues, peers, and co-workers

Colleagues

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.

Peers

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-workers

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 colleagues' performance, in order to reinforce areas of strength and quality, and identify areas for development.[254]

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).

Professionalism - standards of behaviour inherent in professional practice

The MBA's *Good medical practice: a code of conduct for doctors in Australia* explains that, in professional life, doctors must display a standard of behaviour that warrants the trust and respect of the community and that all doctors are expected to base their practice on professional values.

They must:

- make the care of patients their first concern
- practise medicine safely and effectively
- be ethical and trustworthy
- display qualities such as integrity, truthfulness, dependability and compassion
- protect patients' confidentiality
- protect and promote the health of individuals and the community
- provide patient-centred care, understanding that each patient is unique, and work in partnership with their patients, adapting what they do to address the needs and reasonable expectations of each patient
- be aware of their own culture and beliefs and respectful of the beliefs and cultures of others, recognising that these cultural differences may impact on the doctor–patient relationship and on the delivery of health services
- be a good communicator
- demonstrate self-awareness and self-reflection
- reflect regularly on whether they are practising effectively, on what is happening in their relationships with patients and colleagues, and on their own health and wellbeing
- keep their skills and knowledge up to date, including refining and developing their clinical judgement as they gain experience, and
- contribute to their profession.

Revalidation

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'.[255]

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.

General Medical Council, United Kingdom

Revalidation is the term used by the General Medical Council (GMC) in the United Kingdom (UK) 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 CPD.[256]

Appendix G: Acronyms

ACCME	Accreditation Council for Continuing Medical Education (USA)
ACSQHC	Australian Commission on Safety and Quality in Health Care
AHPRA	Australian Health Practitioner Regulation Agency
AMA	Australian Medical Association
AMC	Australian Medical Council
CAHO	Council of Academic Hospitals of Ontario
CAMERA	Collaboration for the Advancement of Medical Education Research and Assessment
CI	Confidence interval
CME	Continuing medical education
CPD	Continuing professional development
CPMC	Council of Presidents of Medical Colleges
CPSA	The College of Physicians and Surgeons of Alberta
CPSBC	The College of Physicians and Surgeons of British Columbia
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 Expert Advisory Group on Revalidation
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
MABEL	Medicine in Australia: Balancing Employment and Life
MBA (or Board)	Medical Board of Australia
MBS	Medicare Benefits Schedule
MCC	Medical Council of Canada
MCNZ	Medical Council of New Zealand
MD	Doctor of medicine
MOU	Memorandum of understanding

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)
NCIS	National Coronial Information System
NHS	National Health Service (UK)
NSPAR	Nova Scotia PAR
OR	Odds ratio
PAR	Physician achievement review (Alberta)
PARS	Patient advocacy reporting system
PBS	Pharmaceutical Benefits Scheme
PC	Practising certificate (NZ)
PDP	Professional development plan
PHN	Primary Health Network
PIV	Professional inspection visit (Quebec)
PPA	Peer practice assessment
PPR-NS	Physician peer review program (Nova Scotia)
PPEP	Physician practice enhancement panel (British Columbia)
PREMs	Patient reported experience measures
PROMs	Patient reported outcome measures
PRONE	Predicted risk of new event
RACS	Royal Australasian College of Surgeons
RPR	Regular practice review (NZ)
RR	Relative risk
USP	Unsolicited patient complaints
VEAB	Vocational education advisory bodies (NZ)

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