# Australian medical regulations and strengthened continuing professional development (CPD): A policy implementation gap analysis with the specialist medical colleges

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#### Abstract

*Introduction:* Starting from 2023, Australian medical practitioners must meet new mandatory continuing professional development (CPD) requirements for registration renewal. In particular, each year they must complete 12.5 hours of educational activities and 25 hours of CPD activities related to reviewing performance and measuring outcomes, with a minimum of 5 hours each for reviewing performance and measuring outcomes activities, and they are encouraged to use patient health data and large eHealth datasets for better insights. Despite concerns regarding data accessibility and outcome measurement, specialist medical colleges are implementing these requirements. This study aims to explore factors influencing colleges' efforts and provide recommendations for future research and action to enable data-driven CPD practices.

*Methods:* A policy implementation gap analysis employing semi-structured interviews as a standalone method was conducted with participating colleges. Four colleges agreed to participate, with a total of 18 participants recruited from either the colleges' staff who are responsible for interpreting and implementing CPD regulatory policies or the colleges' CPD committees. Interviews were analysed using inductive and deductive thematic analysis. Data collection, data analysis and final results were reported using the COREQ checklist.

**Results:** Three themes were identified from the interview analysis: (1) colleges' organisational structure and their roles and responsibilities within the Australasian CPD ecosystem, (2) challenges and enablers for policy implementation and (3) organisational needs and future actions at college level and necessary pre-conditions at ecosystemic level for strengthened CPD.

*Conclusions:* Internal and external organisational factors are hindering colleges' efforts to implement policy. More research, a reassessment of colleges' roles, responsibilities and

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structure, and collaboration among colleges and data holders are necessary to enable full policy implementation and strengthened CPD practices.

*Keywords:* continuing professional development; CPD; data analytics; policy implementation; qualitative research; Australia

### Introduction

Over the last decade, there has been an increasing interest in strengthening registration renewal standards and continuing professional development (CPD) for Australian medical practitioners (Breen, 2014; Mackee, 2014; Roberts, 2015). In the Australian medical regulatory landscape, CPD is defined as "the means by which members of the profession maintain, improve and broaden their knowledge, expertise and competence, and develop the personal and professional qualities required throughout their professional lives" (MBA, 2021, p. 4).

After considering possible models of revalidation (Archer et al., 2015; MBA, 2016a, 2016b, 2017b), in 2017, the Medical Board of Australia (MBA) (2017a) launched a 5-pillar regulatory framework titled Professional Performance Framework (PPF), with the objective of raising professional standards, ensuring safe, effective and ethical medical practice and supporting doctors in taking responsibility for their performance.

In line with the directions of the first pillar of the PPF, "strengthened continuing professional development" (MBA, 2017c), in 2017, the MBA revised its CPD registration standards to strengthen the alignment among CPD activities, practitioners' scope of practice and safe and quality care (MBA, 2017a). Approved by the Health Ministers Meeting (HMM) in 2021 and effective from January 2023, the revised MBA CPD registration standards introduce more stringent CPD requirements for medical practitioners with specialist registration (MBA, 2021).

For the first time in the history of Australian medical regulations (Geffen, 2014) and in a departure from previous MBA CPD standards (MBA, 2010, 2016c), the current MBA standards set *mandatory* CPD requirements with regards to:

- the subscription to a CPD home for quality assurance purposes—according to the MBA, a CPD home is "an organisation that is accredited by the Board's accreditation authority, the Australian Medical Council, to provide a CPD program for medical practitioners. This organisation may be an education provider, another organisation with primary educational purpose or an organisation with a primary purpose other than education" (MBA, 2021, p. 4).
- the development of a written annual professional development plan (PDP)
- a minimum CPD annual hour requirement (50 hours)
- the types (or categories) of CPD activities to complete, i.e., educational activities, reviewing performance activities and measuring outcomes activities

- a minimum annual hour requirement for each type (or category) of CPD activity (12.5 hours of educational activities and 25 hours of reviewing performance and measuring outcomes activities, with a minimum of 5 hours each for reviewing performance and measuring outcomes activities).
- the remaining 12.5 hours, and any CPD activities over the 50-hour minimum, across any of these types of CPD activity.

As an additional specification, the MBA PPF and other supporting policy documents indicate that reviewing performance and measuring outcomes activities require the analysis of patient health data and, ideally, the use of large eHealth datasets and big data analytics technologies for better insights (MBA, 2017a, 2017b).

As per their institutional role, the Australian specialist medical colleges (the colleges) have the responsibility to interpret and apply the MBA PPF and CPD standards, as well as to provide a CPD program to their fellows (AMC, 2015). As per the MBA definition:

"A CPD program includes details of the CPD activities needed to meet the program and Board requirements; resources and/or activities to support completion of the program requirements; a system for participants to document their professional development plan, self-evaluation and CPD activities, and to store evidence of their participation; processes for assessing and crediting activities; and processes for monitoring compliance, auditing activity and taking appropriate action for failure to meet the program requirements." (MBA, 2021, p. 4)

During the public consultation phase (MBA, 2019), the colleges voiced their concern around the changes introduced by these policy documents and, in particular, around their ability to be implemented. In line with existing evidence, many colleges flagged the presence of data accessibility and availability issues in the current CPD ecosystem (Bucalon et al., 2023; Pizzuti et al., 2023; Tavares et al., 2023), and some emphasised the challenges inherent in the development of CPD activities linked to performance assessment and data analytics (Ellaway et al., 2014; Handfield-Jones et al., 2002; Pizzuti et al., 2023; Pusic et al., 2023; Thoma et al., 2020).

At present, there is little information regarding how the colleges are navigating these implementation issues while striving to provide medical practitioners with tools and guidance to meet their CPD requirements in this new regulatory landscape.

#### Aims

Considering the above, this study aimed to:

• investigate the factors, challenges and enablers that have influenced and are still influencing colleges' efforts to interpret and implement the first pillar of the PPF and the MBA CPD standards

- identify what resources and conditions are needed by the colleges to successfully implement regulatory policies and, concurrently, to support fellows in their CPD obligations
- provide the colleges with recommendations and direct further research on these matters.

In order to address the study aims, a policy implementation gap analysis was performed, utilising semi-structured in-depth interviews as a research method.

# Methods

Driven by real-world problems (Birkland, 2016) and designed to produce actionable results at organisational level (Hakim, 2000), the study design was informed by the principles of applied policy research (Springer et al., 2017) and the key concepts of organisational theory (Badham & Santiago, 2023).

A gap analysis for policy implementation was chosen as a preferred method, as it allows researchers to assess the discrepancy (or gap) between the current state of affairs and a desired future state. Hence, it helps identify potential challenges that may hinder policy implementation and determine specific areas of improvement in order to achieve stated policy objectives (Kim & Ji, 2018). Gap analysis has proven to be a successful method within diverse health science disciplines, including but not limited to public health (Khan et al., 2014; McAteer et al., 2019), health administration (Silvestro, 2005; Wang et al., 2016) and health policy (Golden et al., 2017), particularly in contexts necessitating the identification of disparities and/or discrepancies and the formulation of strategies for improvement.

Data gathering for gap analysis can be conducted using both quantitative and qualitative methods. In this study, in-depth semi-structured interviews were used as a standalone method for data collection (McIntosh & Morse, 2015).

Data collection and analysis were guided by contextual, evaluative and strategic objectives, which respectively aim to:

- identify current-state contextual factors
- appraise the effectiveness of the current state of affairs
- determine plans and actions to achieve the desired future state (Ritchie & Spencer, 2002).

In line with these objectives, the data collection and analysis sought to identify roles and responsibilities of the colleges in the Australian CPD ecosystem (contextual objective), identify challenges and enablers for policy implementation (evaluative objective), identify organisational needs, strategic actions and any other factor or condition necessary to successfully implement policy directives (strategic objective).

The COREQ checklist was used to report data collection, data analysis and the study results (Tong et al., 2007).

# Data collection

### Participant recruitment

Research participants were purposefully recruited from (1) the colleges' staff members responsible for interpreting and implementing the MBA framework and standards, overseeing CPD compliance and developing CPD resources, tools and activities and (2) the colleges' CPD committee members, who are fellows and whose main responsibility is to oversee and provide expertise for CPD-related matters at college level.

Potential research participants from all colleges (AMC, n.d.) were contacted using publicly available general administration or individual email addresses. A total of 18 research participants from four colleges agreed to participate (Table 1). All participants provided digital written consent to participate. REDCap (Version 13.4.10) was used to acquire, manage and store all participant consent forms.

#### Table 1

Participating Colleges	Number of Participants
Royal Australian College of General Practitioners (RACGP)	4
Royal Australasian College of Physicians (RACP)	7
Royal Australian and New Zealand College of Psychiatrists (RANZCP)	2
Royal Australasian College of Surgeons (RACS)	5

Participating Colleges and Number of Participants for Each College

#### Interviews

Interviews were conducted following a semi-structured outline. The interview questions were designed to identify the institutional roles and responsibilities of the colleges in relation to CPD compliance, management and development (contextual objective), current challenges and enablers for policy interpretation and implementation (evaluative objective) and desired future state with regard to strengthened and data-driven CPD practices at college level (strategic objective).

The interviews in this study were conducted over a period of 9 months, starting in July 2021 and concluding in March 2022. The average duration of the interviews was 60 minutes. All interviews were conducted on Zoom and audio- and video-recorded for analysis purposes. Audio-recordings were transcribed verbatim using Rev.com professional human transcription services.

# Data analysis

Deidentified interviews were analysed by the first author using a combined technique of deductive (question-driven) and inductive (data-driven) thematic analysis (Fereday & Muir-Cochrane, 2006; Swain, 2018). At first, a deductive coding technique was employed, and top-level codes were established a priori considering the study aims and the interview questions. An inductive coding technique was then utilised, and additional a posteriori codes were created from the interview data. The coding tree was refined through several rounds of iterative analysis and finalised when data saturation was achieved. NVivo (Version 20.6.1, from QSR) was used for data storage, management and analysis.

In order to achieve reflexivity in line with the items outlined in "Domain 1: Research team and reflexivity" of the COREQ checklist (Tong et al., 2007, p. 351), the first author acknowledged and took into consideration her personal characteristics and her relationship with the participants during the whole research process.

# Ethics approval

The study was approved by the University of Sydney Human Research Ethics Committee (Protocol Number 2020/722).

# Results

Three main themes, eight subthemes and 29 sub-subthemes resulted from the analysis of the interviews with participating colleges. Table 1 provides the list of participating colleges. Figure 1 illustrates the coding tree of the themes, subthemes and sub-subthemes. Table 2 contains representative quotes related to the themes, subthemes and sub-subthemes subthemes outlined in Figure 1.

# Theme 1: Colleges and CPD

# Colleges' role

All participants identified the core roles of the colleges in the CPD ecosystem as CPD provider and member-based organisation providing advocacy, support and education to medical practitioners. In doing so, participants often remarked on the difference of roles between the colleges and the MBA, emphasising the educational and training duties of the colleges on one hand and the regulatory functions of the MBA on the other.

Also, several participants pointed out how the colleges need to carefully balance their dual role in order to fulfill their responsibilities adequately. As CPD providers, colleges must provide to their members a CPD framework in accordance with existing regulatory requirements. However, as member-based organisations, they must also consider the feedback and needs of their members at all times.

### Figure 1

Themes	Subthemes	Sub-Subthemes
		CPD provider
	Colleges' role	Member-based organisation providing support, advocacy
		and education to medical practitioners
Colleges and CPD	Colleges' responsibilities	Implementing MBA policies Administering CPD programs Developing CPD resources Offering a CPD platform Reporting CPD non-compliance Supporting fellows in meeting their CPD requirements
	Colleges' organisational structure	CPD compliance teams CPD education development teams
		Conceptual
	Challenges	Operational
	Chanenges	Cultural Organisational
Current state:		Ecosystemic
Challenges and		Loosystemic
enablers for policy implementation		Transition CPD programs
Implementation		
		Targeted education on new CPD requirements
	Enablers	Targeted education on new CPD requirements <ul> <li>Development of new CPD resources and tools for Cat. 2 and 3</li> </ul>
	Enablers	
	Enablers	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3</li> </ul>
	Enablers	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3</li> <li>Categorisation of college-developed CPD resources</li> <li>Use of champions for policy adoption</li> </ul>
		<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3</li> <li>Categorisation of college-developed CPD resources</li> <li>Use of champions for policy adoption</li> <li>Human and financial resource allocation to CPD</li> </ul>
	Enablers Organisational needs	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3</li> <li>Categorisation of college-developed CPD resources</li> <li>Use of champions for policy adoption</li> </ul>
	Organisational	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3</li> <li>Categorisation of college-developed CPD resources</li> <li>Use of champions for policy adoption</li> <li>Human and financial resource allocation to CPD</li> </ul>
	Organisational	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3 Categorisation of college-developed CPD resources Use of champions for policy adoption</li> <li>Human and financial resource allocation to CPD</li> <li>Membership communication and engagement</li> <li>Innovative technologies for CPD</li> </ul>
Desired state:	Organisational	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3 Categorisation of college-developed CPD resources Use of champions for policy adoption</li> <li>Human and financial resource allocation to CPD</li> <li>Membership communication and engagement</li> <li>Innovative technologies for CPD</li> <li>High-quality and personalised CPD offer</li> </ul>
	Organisational	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3         <ul> <li>Categorisation of college-developed CPD resources</li> <li>Use of champions for policy adoption</li> </ul> </li> <li>Human and financial resource allocation to CPD         <ul> <li>Membership communication and engagement</li> <li>Innovative technologies for CPD</li> <li>High-quality and personalised CPD offer</li> <li>Use of eHealth data analytics to inform CPD programming</li> </ul> </li> </ul>
Desired state:	Organisational needs	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3 Categorisation of college-developed CPD resources Use of champions for policy adoption</li> <li>Human and financial resource allocation to CPD</li> <li>Membership communication and engagement</li> <li>Innovative technologies for CPD</li> <li>High-quality and personalised CPD offer</li> </ul>
Desired state: Needs, actions,	Organisational needs	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3 Categorisation of college-developed CPD resources Use of champions for policy adoption</li> <li>Human and financial resource allocation to CPD</li> <li>Membership communication and engagement</li> <li>Innovative technologies for CPD</li> <li>High-quality and personalised CPD offer</li> <li>Use of eHealth data analytics to inform CPD programming and planning</li> <li>Evaluation of policy impact</li> </ul>
Desired state: Needs, actions,	Organisational needs Future actions	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3         <ul> <li>Categorisation of college-developed CPD resources</li> <li>Use of champions for policy adoption</li> </ul> </li> <li>Human and financial resource allocation to CPD         <ul> <li>Membership communication and engagement</li> <li>Innovative technologies for CPD</li> </ul> </li> <li>High-quality and personalised CPD offer         <ul> <li>Use of eHealth data analytics to inform CPD programming and planning</li> <li>Evaluation of policy impact</li> </ul> </li> <li>Data accessibility and benchmark availability</li> </ul>
Desired state: Needs, actions,	Organisational needs	<ul> <li>Development of new CPD resources and tools for Cat. 2 and 3 Categorisation of college-developed CPD resources Use of champions for policy adoption</li> <li>Human and financial resource allocation to CPD</li> <li>Membership communication and engagement</li> <li>Innovative technologies for CPD</li> <li>High-quality and personalised CPD offer</li> <li>Use of eHealth data analytics to inform CPD programming and planning</li> <li>Evaluation of policy impact</li> </ul>

Coding Tree of the Themes, Subthemes and Sub-Subthemes Emerging From the Analysis of the Interviews

Table 2 Representative Quotes Related to the	tes Related to the		Themes, Subthemes and Sub-Subthemes Outlined in Figure 1
		CPD Provider	Ultimately, it's the MBA that decides whether someone's fit for practice We're not the police in this sense. We are there to provide a [CPD] framework; we're there to be facilitators; and we're there to provide education resources. (PO5)
	Colleges' role	Member-based organisation	Regulatory bodies come with what they would want. They've got their own reasons why they want that. But we also look at the practical aspect and give a viewpoint, because we are [a] membership organisation, we are not just CPD providers who look what [it] is the regulator [is] saying and then make it. We are a representative organisation. So, we look at what's the feedback [from the members], (P18)
		Implementing MBA policies	The RACP is accredited by the AMC [Australian Medical Council] and MCNZ [Medical Council of New Zealand]. So, we are responsible for interpreting the requirements and implementing them for our fellows I don't suppose we're implementing the [MBA] PPF, we're implementing aspects of it because the PPF is a fairly large extensive document that covers a lot of areas that we are not touching We're focusing on the CPD strengthening, CPD aspects of the PPF. (POT)
		Administering CPD programs	Colleges have got various responsibilities. One is the administration of CPD programs. So each year, we have a CPD program, which gets modified each year, so for each year, we come out with a CPD program, look like [sic] what are the activities, and look at the [CPD] requirements of the regulators [MBA and MCNZ], what they are asking. So, we put out a list of activities which members could do, and then they submit it as they go along doing it. (P18)
Colleges and CPD	Colleges' responsibilities	Developing CPD resources	We develop CPD activities We are a CPD home as the MBA terminology describes our role We provide CPD opportunities to our members That could be an online course, a podcast, curated collection, a handbook, paced learning, like a Q streams, and so forth. (PO3)
		Offering a CPD platform	We have to have a platform where they [fellows] can record the data regarding their professional development, according to our [CPD] framework. (P01)
		Reporting CPD non-compliance	They [college CPD staff] look after setting the standards, making sure that people are complying and entering their data as well as doing audit for a certain percentage of fellows every year to make sure that what they're putting in the system is correct. (P13)
		Supporting fellows in meeting their CPD requirements	Our responsibility is to support our fellows in meeting their regulatory requirements as well. So, I suppose it's a shared role [with the MBA], but the responsibility does lie very heavily on colleges to do that. (P07)
	Colleges' organisational	CPD compliance teams	The actual compliance side in CPD they [compliance team members] look after setting the standards, making sure that people are complying and entering their data as well as doing audit for a certain percentage of fellows every year to make sure that what
	structure	CPD education development teams	they're putting in the system is correct [The team] I lead looks after delivery and development of professional development activities for fellows of the college. (P13)

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Current state: Challenges and enablers for policy implementation	Challenges	Conceptual Operational (Medical practitioner's attitudes) Organisational	Those two categories are very difficult to put a hard line between. So that's a little bit of an issue as such A surgeon can measure (heif) ourcomes because [hey] can say; they! do an operation, and they!/ have markers. What was the level of post op infection? Were there any complications? Did the patient die? Did the patient get well? so, they could actually tick off measuring of outcomes, but when you come to general practice, that's a lot more difficult, I think. (POB) It's really hard to measure outcomes. Getting data is really hard for most clinicians. It's not part of our workflow, and we don't know how to get the data half the time. So, it's really withcut, (POB) <b>Towards CPD.</b> I think a barrier has just been the attitudes [of the fellowship] towards CPD in general, that it's a tick box thing, not really of any value The culture and the mindset have been a barrier. (POB) <b>Towards changes in CPD requirements.</b> There was a lot of postback from members, a lot of complaints, a lot aggression and a lot of senior propile saying. "Why do I have to do this?" We finedical practitioners] are, for the most part, autonomous. We might work in teams, but were very much the masters of our own destiny for most of the work that we do. And it's a bit hard to, to say, "fou must, you have to do this now." (POG) <b>Towards the Colleges</b> . (The felows!) thought it was the college that was implementing that, and not the regulator. It's work that work in teams, but thas been a college that their college that was implementing that is a certain port or they could practitioners, but thas been a college that their college that was implementing that and not the regulator is the practitioners to this absent the file that frier college that was implementing that is a certainer for a cay. "You must, you have to do this now." (POG) be, you know, something bad could happen because they? re reporting on it. (PO4) be, you know, something bad could happen because they? re reporting on it. (PO4) be
			<b>Communication to members.</b> [What] we learned from that is you can't land something on the [medical practitioners] that is absolutely different to what they've done before You have to communicate and educate. So that's been our challenge, is communicate and educate. (POS)
			<b>Evaluation processes.</b> The problem is that, even if you do it [reflecting on outcomes], we're not following up on how you have applied those learnings throughout that process. And we don't do like a pre-intervention, post-intervention comparison or anything like that. So, I think they [medical practitioners] really lose that value of doing it. (POB)

Current state: Challenges and enablers for policy implementation	Challenges (continued)	Organisational (continued) Ecosystemic Transition CPD programs Targeted education on new CPD requirements	Accountability measures. Currently, if people uploaded a blank page, the college system will not detect it. Because it'll only be detected if it comes for audit. (P18) <b>Governance.</b> Because we're an organisation where everything is physicians led, it's also been a challenge to sometimes get some of the [CPD] committee members on board, to move some of the decisions forward. (P04) When we talk about performance data, performance is, by its nature, a domain of the employer. And we don't have anything to do with the employer, because the employers are the hospitals, private or public or universities, not the college. We [the colleges] with the employer, because the employers are the hospitals, private or public or universities, not the college. We the colleges] with the employer, because the employers are the hospitals, private or public or universities, not the college. We let colleges] with the employer, because the employers are the hospitals, which is one of the functions of the college And this is the only. I would say, interaction the college has with the proposals from the PF were pretty enormous. And we knew it was going to be a big cuture shift and a lot of change for our fellows. So we implemented a transition framework, which introduced Categories 2 and 3, uh, which was reviewed performance and measuring outcomes. We introduced the transition as a slowly, slowly measure to introducing Categories 2 and 3. Uture requirement." (P04) We're also developing educational resources for fellows on activities around Categories 2 and 3 to develop their understanding around the purpose. Um what's relevant to their scope of practice, what they can incorporate into their kind of daily work. (P04)
(continued)	Enablers	Development of new CPD resources and tools for Cat. 2 and 3	Category 2 and 3, we have been working in the last couple of years to provide tools to support physicians in claiming the credits for the into these two categories. So, we have like audit tools. We have developed a professional development plan, which is useful when you want to review your own performance, we provide checklists, for instance, that can be useful when you review the performance of your colleagues or when you have a meeting with other colleagues in hospital to review the performance of your colleagues or when you have a meeting with other colleagues in hospital to review the performance of the ward, for instance. So, we have been developing a number of different tools and instruments to support, and resources in general, to support our fellows in meeting the requirements for Category 2 and 3. (PO3)
		Categorisation of college- developed CPD resources	What we also did is we started to categorise all the CPD activities into clinical knowledge and then the measuring outcomes, reviewing performance aspects. So these are all here, in the platform already, none of it is mandated, but it's building familiarity, (PO9)
		Use of champions for policy adoption	So that's been really exciting to see that the members of that committee [CPD committee] really love lifelong learning and want to pass that on to the wider fellowship. So they've really been a great enabler, and a lot of them have shared personal stories and we've used them as CPD champions. Um, and trying to show the fellowship, "here is an example of a fellow who's doing these specific activities. Maybe you could do something similar" They are great role models of how you can make CPD work for you, meet your requirements, but at the same time have what you do benefit your own practice and your patients. (PD6)

I would say resources. So, I would say, um, people on the ground in the faculties, additional resources in the faculties, additional resources in the faculties, additional resources in the CPD team. So, through COVID, no positions were backfilled We lost staff, they weren't replaced. (P11)	In an ideal world, a comms platform that reached effectively our membership would be fabulous. I think we have to acknowledge in this time that we've so many different means of communication. People have different preferences, so you have to carefully go down each of those communication channels, which means you can end up blitzing some fellows with the same messaging but not reaching others. (PO4)	The most amazing thing would be if there was some kind of very useful dashboard, uh, coaching dashboard, that we could supply for our fellows. Then they could hook into their own data from hospitals and that dashboard could tie automatically into our CPD for our fellows. Then they could hook into their own data from hospitals and that dashboard could tie automatically into our CPD platform From the first time I started with the college, I always had this desire that we would have something like a blog or an online community It really would have to give real-time advantage in getting reflections on client cases something where a real-time good communication between the college and the fellows and the fellows and each other among the fellows. (P0)	We need to ensure that we're offering those deep learning because what the medical board wants is quality, quality CPD. The medical board wants that quality education. We also want to move into the next phase of CPD for the college and that is us developing quality education. (PO9)	I think we would need a strong collaboration with private and public hospitals that all the specialist medical colleges receive reports quarterly from private and public hospitals with deidentified electronic health data. This electronic health data could be either raw data that need to be analysed or already analysed Depending if we receive analysed data, we wouldn't need many resources. In the other case, if we receive raw data, we would need a proper like unit or team to be able to analyse the data and extract the content, which will inform the production of educational resources At this point in time, the electronic health data space is so fragmented that, to me, this seems like a you know, a very distant future possibility. (PO3)	I think it's important for us, for the MBA to look at does this impact the amount of practitioners who stay registered? How challenging CPD is for those who are semi-retired locums? If they choose to no longer practice because the CPD requirements are, in their opinion, too much? There needs to be somebody looking at that. (PDT)	[What] would be great is if the fellows had access to the data on treatment of patients and the outcomes for the patients readily accessible. If they're able to compare it to others in their hospital and others in this state or country. (P01)
Human and financial resource allocation to CPD	Membership communication and engagement	Innovative technologies for CPD	High-quality and personalised CPD offer	Use of eHealth data analytics to inform CPD programming and planning	Evaluation of policy impact	Data accessibility and benchmark availability
Organisational needs			Future actions	1	Ecosystemic conditions	
			Desired state: Needs, actions and conditions			

When we make policy, it's important that we make it shorter so that there is more chance people will read it Policies don't solve problem[s]. You can't say download [this] policy and go to sleep. Providing services will be the most important thing It [policy] has to be succinct and easy to implement flyou make it difficult, it will not be implemented. Your implementers and cost will be so much that when you go to get budget for that, nobody will be there. Regulatory bodies are not providing funds. If they want more and more activities for regulation, then they should simultaneously ask the parliament [to] increase the funding, increase the funding have that sort of viewpoint. They say. 'Wo, we are regulatory we're not concerned with anything else". (P18)	<b>Culture of expertise among CPD professionals.</b> I don't think that we have the same culture of CPD delivery as they do in other countries. For example, America or Canada, where they have whole departments that make CPD programs, they've got instructional designers, they do gap analysis, they do evaluation, they do all this wonderful work, and we don't tend to do that And the concept of a CPD professional doesn't really exist in Australia and New Zealand Whereas in America, Canada, in particular, that definitely does exist, and they have whole accreditation systems for CPD that we don't they do evaluation.	<b>Culture of life-long learning among fellows</b> . <i>I just feel that I think there's a culture shift that needs to occur in medicine from kind of a paranoia around it [CPD] being used against doctors to highlight outliers or practitioners that might not be performing to shift into actually, um, can be utilised to develop your own knowledge and skills</i> . (P04)	<b>Culture of reflection in the workplace.</b> <i>In a future state, we have a culture whereby all the clinicians are recognised that understanding their performance is fundamental to who they are and what they do, that they have easy access to resources that allow them to do it, that are relevant to their practice and that they are supported in their workplaces to get this done, and they then get to share this with their volleagues Just the culture is not there. (PO5)</i>		
Clear policy and regulators' support	Cultural shifts				
Ecosystemic conditions (continued)					
	Desired state: Needs, actions and conditions (continued)				

### Colleges' responsibilities

Expanding on the previous subtheme, participants stated that the key responsibilities of the colleges in the CPD ecosystem are the following: (1) interpreting and implementing the regulators' CPD policies and requirements, (2) administering CPD programs in line with the CPD requirements set by the relevant medical regulators, (3) developing CPD resources and activities and, upon quality assessment, including external ones in their educational offerings, (4) offering a CPD platform to fellows to record their CPD activities, (5) reporting fellows' CPD non-compliance to the relevant medical regulator and (6) supporting fellows in understanding their CPD obligations and meeting their CPD requirements.

# Colleges' organisational structure

While describing colleges' roles and responsibilities, several participants also alluded to the internal structure that currently governs CPD management and development at an organisational level. Despite the existence of differences among the colleges, CPD offices appear to be composed of two main teams: CPD compliance and CPD education. The primary functions of each of these teams could be summarised as follows. The CPD compliance team oversees the setting of CPD standards, ensures compliance with regards to members' CPD recording and conducts compliance audits for a percentage of fellows annually. The CPD education team focuses on developing and delivering professional development activities for fellows.

# Theme 2: Current state: Challenges and enablers for policy implementation

# Challenges

Participants mentioned several challenges related to policy implementation. Reported challenges can grouped in five domains: conceptual, operational, cultural, organisational and ecosystemic.

# Conceptual.

First of all, participants commented on the lack of clear definitions and/or descriptions for Category 2 (reviewing performance) and Category 3 (measuring outcomes) CPD activities in the current policy documents developed by the MBA. Moreover, many participants observed how these two CPD categories are often perceived as overlapping or difficult to distinguish for medical practitioners and college staff members alike.

Secondly, some participants questioned the concept of outcome measure and its applicability in the CPD context. In particular, participants noted that measuring outcomes activities could be challenging, especially for those medical practitioners whose scope of practice is non-clinical or for those who belong to a specific specialty, such as psychiatry, public health medicine, medical administration, occupational medicine and environmental medicine. Notably, participants made a clear distinction between interventional and non-interventional specialties, commenting in particular on how measuring outcomes is easier for surgeons.

Thirdly, participants noted how measuring outcomes might be challenging for individuals, as patient care is increasingly team based.

# Operational.

All participants stated that data availability and accessibility is the biggest operational challenge when it comes to measuring outcomes. Some participants also clarified that data availability and accessibility are currently heavily dependent on work conditions, career stage (e.g., part-timers and semi-retired fellows) and workplace settings (e.g., private practice and rural or remote practice). In addition to this, participants raised concerns about the lack of standardisation of most measuring outcomes activities performed in workplace settings and noted how this could affect their quality and significance for educational and professional development purposes.

### Cultural.

All participants considered medical practitioners' attitudes towards CPD and CPD requirements, CPD providers and the use of eHealth data for CPD as another challenge for policy implementation. Participants flagged fellows' opinions and positions on these matters as problematic and provided some insights into them as follows:

*Attitudes towards CPD*. Rather than an opportunity for continuous learning and development, CPD is regarded by many fellows as ineffective in improving performance, as a "tick-box thing" (P06) or as "a pretty big stick" (P05).

*Attitudes towards current CPD requirements.* The current changes in CPD requirements were initially met with resistance, pushbacks and complaints—especially by those fellows who question the evidence for change, expect workarounds or find it difficult to be told what to do.

*Attitudes towards CPD providers.* The colleges are often seen by the fellows as the organisations that introduce policy changes with regards to CPD requirements.

Attitudes towards the use of eHealth data for CPD purposes. Many fellows fear repercussions if the results of their performance review and measuring outcomes activities are used by the regulators or their employer for punitive purposes.

# Organisational.

Participants also shared that a number of organisational challenges are currently hindering policy implementation: (1) the bi-national status of most colleges, i.e., colleges have the responsibility to develop a CPD program in accordance with both MBA and MCNZ policy directives, (2) the lack of financial, human and technological resources allocated to the CPD offices, (3) the communication and educational strategies employed

to inform the fellowship about recent policy changes, (4) the lack of evidence around the effectiveness of measuring outcomes activities, coupled with the absence of robust evaluation tools and processes to assess their effectiveness, (5) the lack of accountability measures to prevent medical practitioners from "gaming the system" when providing evidence for CPD completion and (6) the physician-led governance that characterises the colleges.

### Ecosystemic.

Finally, several participants commented on ecosystemic challenges, describing current eHealth data systems as "fragmented" (P03). Participants also pointed out that the colleges, historically and institutionally, are not data holders and do not have partnerships in place with existing data holders, such as hospitals and universities, with regards to the use of eHealth data analytics for CPD purposes.

### Enablers

Participants were asked to share what helped the colleges transition to the new CPD standards in the timeframe from November 2017 (when the MBA launched the PPF) to December 2022 (policy effective date: 1 January 2023). According to the participants, colleges' practical strategies for easing into the current CPD requirements included: (1) the development of "transition CPD programs", with minor changes introduced every year and often with no or lower mandatory minimum hour requirements per CPD category, (2) the development and delivery of targeted education on new CPD requirements for all fellows, with a particular focus on educational resources explaining how to conduct and claim CPD activities for Categories 2 and 3, (3) the development of new CPD resources, tools and activities for Categories 2 and 3, (4) the categorisation of both existing and new college-developed CPD resources, tools and activities according to the three CPD categories set by the MBA and (5) the involvement of CPD committee members as champions to encourage policy adoption among the broader fellowship.

#### Theme 3: Desired state: Needs, actions and conditions

#### Organisational needs

When asked to envision an ideal state, participants were prompted to reflect on the organisational needs of the colleges to successfully implement the MBA CPD policies and standards. All participants agreed on the following needs: (1) a more extensive allocation of human and financial resources to the CPD offices and related teams, (2) an improvement in the communications with the fellowship and an increased level of engagement among the fellows and (3) the development and delivery of innovative technologies for CPD management, delivery and recording (e.g., MyCPD app and data-informed reflective practice tools, such as interactive dashboards) and/or the upgrading of already existing technology solutions (e.g., MyCPD platform, learning management

systems [LMSs], customer relationship management [CRM] systems, project management systems, online community platforms).

#### Future actions

Participants were also invited to share their opinion on what the colleges should do next to strengthen CPD and support their fellowship. Suggested future actions included: (1) developing high-quality CPD resources and tools and offering personalised CPD options to all medical practitioners, (2) using eHealth data analytics to inform CPD programming and planning, even though this "terrific learning [opportunity]" (P01) comes with substantial challenges, such as interorganisational collaboration, cooperation and alignment, organisational resources and expertise and fellows' engagement and support and (3) evaluating the impact of the new MBA CPD requirements, in particular in terms of workforce availability.

#### Ecosystemic conditions

Finally, participants specified some of the conditions necessary for full policy implementation and data-driven CPD: (1) data accessibility and benchmarking availability for all medical practitioners, (2) clear policy directives and more support from the medical regulators and (3) three main cultural shifts in the CPD ecosystem, i.e., a culture of expertise among CPD professionals, a culture of life-long learning among fellows and a culture of reflection in the workplace.

#### Discussion and recommendations

The aim of this study was to identify gaps in regulatory policy implementation among the Australian specialist medical colleges and to propose key recommendations for further research and future action at an organisational level. Overall, the study results show that several internal organisational factors and a number of external conditions have been having—and still have—an impact on colleges' efforts in closing the existing policy implementation gap and strengthening CPD for medical practitioners.

A first consideration of the results concerns the position of the colleges in the CPD ecosystem. Borrowing a concept from organisational and management theories, it appears that the colleges are currently in the so-called "sandwich position", which characterises middle management at an organisational level caught in between stakeholders with different interests and objectives and expected to have intermediary functions and responsibilities (Abdullah & Sofyan, 2022).

According to the participants, such a position is creating tension at an operational level and hindering regulatory policy implementation. Considering that the present situation is a direct consequence of colleges' dual role, future research at an inter- and intraorganisational level is necessary to guide a potential reassessment of colleges' duties and tasks. In addition to this, an open conversation should be held among colleges, medical regulators and fellows, as it appears pivotal to solve current tensions.

A second consideration of the results pertains to the current organisational structure of the colleges. Historically, the colleges have focused on trainees' education, training and curriculum development (Geffen, 2014). Also, it appears that CPD offices have, so far, focused on compliance management and the development and delivery of traditional education resources rather than research and innovation in CPD.

Study results suggest that original and applied research on CPD could provide the colleges with evidence to mitigate policy implementation challenges and strengthen enablers, and guidance to move towards the "desired state" described by the participants (Theme 3) and to navigate challenging ecosystemic conditions. Furthermore, research on CPD could promote a culture of expertise in CPD at college level. A strong commitment to the ongoing learning, skill development and knowledge enhancement of CPD professionals is essential for CPD providers to stay competitive and relevant in the CPD ecosystem. In light of the new AMC accreditation criteria for CPD homes (Australian Medical Council & Medical Board of Australia, n.d.), this aspect is particularly relevant for the colleges. These new criteria, in fact, allow various organisations—not just colleges must invest in the ongoing professional development of their CPD professionals to stay competitive.

Given this, colleges might consider developing research teams in their CPD offices and/ or building research partnerships with other colleges and CPD providers, academia and other research institutions. It is worth noting that such operational and organisational change would also allow colleges to address other research needs that have emerged from the results of this study, including: (1) development of a definition of "outcomes measure", (2) development of best practices in CPD development and delivery, (3) evaluation of the impact of the new CPD requirements and programs and (4) development of research evidence on CPD.

*Development of a definition of "outcome measure"*. This is particularly important when the definition is used to assess the performance of an individual practitioner in a specific specialty. Given the lack of agreement on this (Overeem et al., 2007; Pantaleon, 2019), original research on the matter—especially if conducted in collaboration and co-design with fellows—would put the colleges at the forefront of the CPD field. In addition, research findings could potentially mitigate the perceived gap in assessing the performance of interventional versus non-interventional specialties and provide valuable insights on how to measure individual performance in team-based practices.

*Development of best practices in CPD development and delivery.* In particular, original research should focus on the design of evidence-based CPD programs, targeted education on CPD requirements and quality CPD activities and tools in all CPD categories for all specialties, career stages and learning needs.

*Evaluation of the impact of the new CPD requirements and programs*. New CPD requirements and programs should be evaluated in terms of workforce availability, as suggested by the participants. In addition to this, they should also be evaluated for their effectiveness in improving quality care standards and patient safety (Allen et al., 2019; Davis & McMahon, 2018).

*Development of research evidence on CPD*. Evidence-based research on CPD would allow the colleges to effectively liaise with and respond to the medical regulators and, if necessary, propose detailed and practical alternatives for better policy development and implementation.

A third consideration focuses on the organisational challenges faced by the colleges and the organisational needs they appear to have. Based on study results, specific recommendations cannot be made unless further research is conducted on (1) the allocation of resources to CPD offices, (2) member engagement and communication to members in medical professional organisations and associations, (3) evaluation processes of CPD programs and activities, (4) accountability measures for CPD completion and compliance and (5) governance and approval processes at college level.

*Allocation of resources to CPD offices.* As CPD is the longest period in the education and learning continuum of health professionals (Mazmanian et al., 2021), it would be worthwhile to investigate what resources are required by CPD offices to strengthen CPD, especially in light of ongoing research on CPD cost effectiveness (Brown et al., 2002; Cook et al., 2022) and educational technologies advancements and usage (Bucalon et al., 2022; Cook et al., 2018; Kitto, 2021; Scott et al., 2017).

Member engagement and communication to members in medical professional organisations and associations. Despite the importance of the topic, there is little scholarly research available in this area. As member-based organisations, the colleges are in a privileged position to contribute towards knowledge creation and application and to lead the dissemination of lessons learned in this space.

*Evaluation processes of CPD programs and activities*. Evaluation of CPD programs is not well established (Hosseini et al., 2023). In particular, evaluation research on reviewing performance activities and measuring outcomes activities is at an early stage or ongoing (Bowie et al., 2012; Ferguson et al., 2014; Malatesta International, 2019; Stevens et al., 2018; Vreugdenburg et al., 2018). Colleges could lead further research in these areas and, in doing so, respond to fellows' concerns around CPD effectiveness and value and provide evidence-based rationale to invest in CPD programs.

Accountability measures for CPD completion and compliance. CPD is self-determined, self-directed and self-reported—it is a system largely reliant on *trust*. Yet, international medical regulators are moving away from self-regulation (Yam et al., 2016), and accountability measures, such as appraisals (GMC, n.d.) and annual conversations

(Medical Council of New Zealand, 2019), have been made mandatory by some. Considering these trends, colleges should actively investigate the matter and consider the introduction of some internal measures to help prevent "gaming the system", as a few participants have mentioned (see Theme 1: Organisational challenges).

*Governance and approval processes.* Even though the medical profession in Australia is still largely self-regulated (Breen, 1999; Germov, 2018) and colleges' fellows are directly involved in decision making for institutional reasons, it would be valuable to research whether and to what extent current governance and approval processes at college level are hindering policy implementation and the establishment of innovative CPD programs and practices.

Further considerations emerging from the study results refer to the use of eHealth data analytics to strengthen CPD. Faced with the challenge of distinguishing CPD Categories 2 and 3, it appears that the colleges have, for the most part, developed their CPD programs based on the following criteria: (1) labelling *feedback-based* tools and initiatives, e.g., multi-source feedback (MSF) and practice visits, as *reviewing performance* activities and (2) categorising tools and initiatives based on *patient health data analytics* and already largely employed in healthcare services, e.g., mortality and morbidity meetings (MMM), clinical case reviews, clinical audits and quality improvement (QI), as *measuring outcomes* activities (RACGP, n.d.; RANZCP, n.d.; RACP, n.d.; RACS, n.d.).

In doing so, the colleges are endorsing the substantial difference between the concepts of "feedback" and "data", as suggested by recent research (Ajjawi & Regehr, 2018), and using patients and colleagues' feedback *versus* patient health and eHealth data as a discriminant to differentiate CPD Category 2 and 3 activities. Such distinction drives greater clarity on the use of eHealth data for CPD purposes, enabling more precise research on this emerging scholarly interest (Janssen et al., 2023; Sockalingam et al., 2019; Tavares et al., 2023; Wiljer, Tavares, et al., 2022; Wiljer, Williams, et al., 2022).

Regarding the use of eHealth data analytics for strengthened CPD, recent research shows that a formal linkage between eHealth data analytics and CPD programming and planning has not yet been well determined nor established in the CPD ecosystem (Campbell & Sisler, 2019; Pizzuti et al., 2023). Colleges are advised to conduct and/ or support applied research in this space, as robust scholarly evidence and regulatory guidance are not yet available.

A last consideration is on the existing cultural, operational and ecosystemic influencing factors reported by the participants. Existing literature and ongoing research largely support participants' comments on the existence of (1) data fragmentation and availability and accessibility issues in the healthcare system (Srinivasan et al., 2018), (2) a lack of standardisation of existing performance assessment and measuring outcomes tools and activities (Seigel et al., 2014; Tsang et al., 2022), (3) strong attitudes towards CPD (Hanlon et al., 2021; Wiese et al., 2022) and the use of eHealth data for performance

assessment and CPD (Shaw et al., 2019; Trebble et al., 2015) among medical practitioners and (4) immature feedback and reflective practices in medical education and practice (Archer, 2010; de la Croix & Veen, 2018).

Although the colleges have limited control and influence over these issues, they could nonetheless conduct and/or support more original research on these matters. Furthermore, they could initiate lobbying and advocacy campaigns to tackle data issues and address medical practitioners' attitudes towards CPD—especially in light of the major impact that these challenges are having on successful policy implementation. Finally, they could explore potential collaborations with data holders to break down current interorganisational silos and with healthcare service organisations to avoid duplication of tools and initiatives.

### Strengths and limitations

The strengths of this study include its applied approach, its contextual, evaluative and strategic objectives, and the organisational insights from the interview data. Data collection was limited to four colleges, therefore some of the results might not be valid for non-participating ones. Despite the fact that research participants were purposively selected because of their role in policy implementation and CPD management and development at college level, their views may not necessarily be representative of the official position of the organisation they work for.

# Conclusion

Several internal organisational characteristics and a number of conceptual, cultural and ecosystemic factors are hindering colleges' efforts in implementing the MBA CPD frameworks and standards and strengthening CPD for medical practitioners. More research at intra- and inter-organisational levels, a potential reassessment of colleges' roles, responsibilities and organisational structure, and close collaboration among colleges and data holders are necessary to achieve full policy implementation and enable data-driven CPD practices at both organisational and ecosystemic levels.

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