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Linking the RACGP curriculum to vocational education

Regional training providers face many challenges in delivering vocational training to general practice registrars across Australia. They need to be able to respond to new learning theories and the ever expanding volume of medical knowledge, as well as the changing medical workforce.

In 2008, the Victorian Metropolitan Alliance (VMA) embarked on a project to map the new Royal Australian College of General Practitioners curriculum to the VMA program. The aim of this article is to describe the processes through which the VMA created a curriculum guide for peer learning workshops, supervisors and registrars, designed to be adaptable to various Australian curricula and to be flexible and robust, as well as accessible to the intended users.

Keywords: vocational education/graduate education; education, medical; curriculum

The landscape of medical education is changing in response to new approaches to learning,[1] the expanding nature and volume of knowledge[2] and the changing structure and function of the medical workforce.[3–5] In response to these changes, modern day professional curricula, such as those of The Royal Australian College of General Practitioners (RACGP), have absorbed new approaches to learning and teaching[6–8] in an attempt to capture the breadth, depth and scope of modern medical practice. From a vocational training perspective however, there is a persisting challenge: 'How to meet growing expectations with a consistent approach across the nation while ensuring flexibility in pathways, styles and approaches to learning?'[9] This question is especially relevant given that the profession has two national curricula: the RACGP curriculum[10] and the Australian College of Rural and Remote Medicine (ACRRM) curriculum.[11,12] The 20 regional training providers (RTPs) who deliver vocational training nationally will use either one or both of these to underpin their educational programs.

While many RTPs have shown innovation and ingenuity in identifying the links between their individual programs and a professional curriculum,[13,14] they have also expressed that difficulties arise in identifying the gaps, repetitions and redundancies in the curricula as they relate to the RTP programs. These factors can produce variability in the alignment of different RTP educational programs with the national curricula (*Figure 1*). This can be problematic for medical educators in trying to ensure the curriculum's intentions are reflected in their programs.[1,15,16] This makes it difficult for general practice registrars to track the extent to which their educational opportunities help them meet the curriculum's requirements, especially when undertaking training in more than one RTP.

This problem underpinned a recently completed Victorian Metropolitan Alliance (VMA) project, whose focus was to map the individual learning objectives of the RACGP curriculum to find out where and when they would most suitably be implemented. This map then formed the basis for revisions to the VMA educational program and the development of curriculum guides for both supervisors (to assist them in their teaching sessions) and registrars (to enable them to track the proposed delivery of specific learning objectives). The full description of the mapping project is available from the

VMA. The purpose of this article is to provide an overview of the process and to describe the format of the guides in the hope it will assist others who are grappling with a way to adapt the RACGP (or ACRRM) curriculum for use in their individual settings.

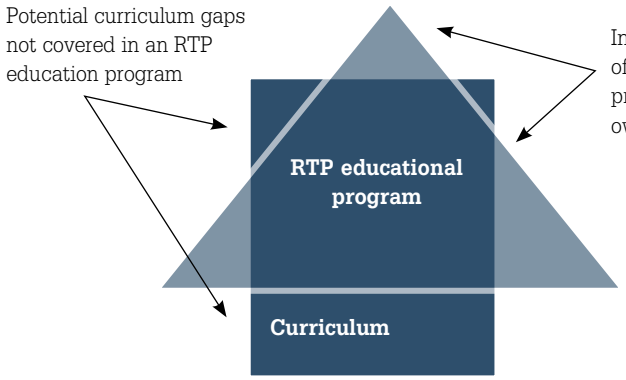

Figure 1. The relationship of an individual RTP's education program to a national curriculum

The square represents a specific curriculum, and the triangle represents an individual RTP. The degree of overlap of a triangle on the square will vary depending on the RTP. In addition, the shape of each triangle will vary, indicating the different focus or emphasis each RTP may give to different components of their education and training program

Designing the process

Although the RACGP national curriculum was a consensus derived document and is well structured, it is not necessarily user friendly. Its size alone (the latest version has increased from 12 key topic areas to 34, with almost 600 individual learning objectives currently in the public domain), while gratifying in its acknowledgment of the complexity of general practice, is daunting from an implementation perspective.

To address this problem, the VMA project design has drawn on two educational models. The first was the Johns Hopkins University School of Medicine's six step approach to curriculum development.[17] This model's strength is its flexibility in the application of each step. It also defined curriculum as a 'planned educational experience', which married with the project outcome.

The second educational model was to employ

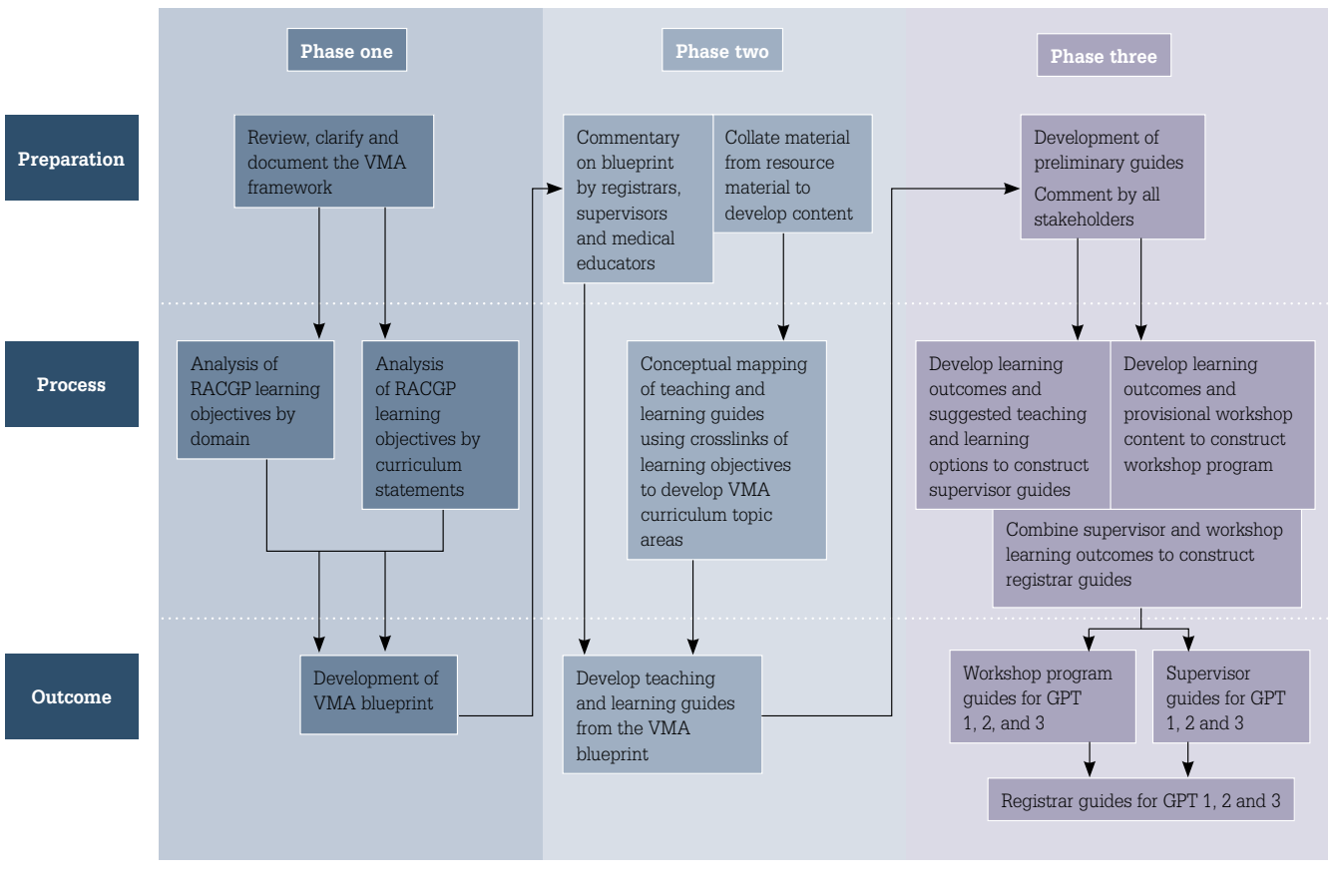

Figure 2. Diagrammatic presentation of the process used to contextualise the RACGP curriculum for the VMA education and training program
GPT = general practice terms

the concepts underpinning curriculum mapping. The value of this method is that it allows the context of delivery to be considered while ensuring the curriculum's relevance for both its users and its recipients.[18] It does this by making the elements of the curriculum more transparent and by demonstrating the links and relationships between the different components of the curriculum, ensuring it remains consistent with 'current' needs.[19]

Designing the project

The project evolved through three interrelated phases over a 2 year period (2008–2010), with each phase starting with a preparatory stage, then progressing to a development stage that then produced an outcome, which fed into the next phase (*Figure 2*). Relevance and transparency were built into the process by an iterative cycle of feedback from VMA supervisors, registrars and medical educators.

The focus of the project design was to produce a central document that incorporated specific predetermined attributes (*Table 1*) and brought together all the main elements of the curriculum (this is the VMA curriculum blueprint). The three guides that evolved from this (ie. the workshop program guide, the supervisor guide and the registrar guide) had clear links to each other.

Table 1. Key attributes required of the blueprint and its associated guides

Attributes	Description
Adaptable	The structure and format of the curriculum has to be sufficiently adaptable to lend itself to both the national general practice curricula, the Fellowship of the RACGP and Fellowship of ACCRM
Deliverable	Ideally the VMA curriculum delivery would match the curriculum intention. A 'hidden' curriculum undermines its potential strength and can create confusion for registrars. Input was sought from all major stakeholders, ie. VMA medical educators, supervisors and registrars
Flexible	Medical education has changed dramatically over the past few years with many different theoretical approaches currently in place. Program needs may also change even if the basic curriculum does not. This format had to be able to accommodate that
Robust	The RACGP stated that it saw its curriculum as evolving, and as such the final program format and structure had to be sufficiently robust to cope with any variations to the College's curricula
Accessible	The final format had to provide easily accessible information for the intended users and be appropriate for both print and electronic platforms

Table 2. Developing the three digit VMA code

Elements of the VMA code	What it means
The first digit represents a single RACGP curriculum statement	1. Aged care 2. Children and adolescent health 3. Disability
The second digit represents a domain of general practice	1. Communication skills and the patient-doctor relationship 2. Applied knowledge 3. Population health and the context of general practice 4. Professional and ethical role 5. Organisational and legal dimensions
The third digit represents the order of the specific learning objective within the domain of general practice	An example of an RACGP learning objective: 'Describe the role of the GP as part of a larger healthcare system'. The code for this learning objective is 9.5.6: • 9 is the population and public health curriculum statement • 5 is the 'organisational legal dimensions' domain • 6 specifies the sixth objective within this domain

Key elements in the process

Within the project design there are four key elements that ensure the guides remain linked to the blueprint.

- A three digit code specific for each RACGP learning objective enabled easy tabulation while maintaining consistency of use across the guides (*Table 2*)
- Each learning objective was prioritised using a colour code to help target teaching and learning within a VMA perspective. Priorities were not based on importance, as all learning objectives are important, but rather on their appropriateness for teaching within a VMA context. Some learning objectives were allocated a priority three as it was felt they would best be acquired through experience and exposure, rather than specific teaching
- The conceptual links between all the learning objectives were mapped, irrespective of priority. This identified all the learning objectives that linked into a specific curriculum statement and those that linked out into other curriculum statements (*Table 3* and *4*)
- Each learning objective was analysed for its most appropriate level for learning and its most appropriate context for teaching and learning. Raters were given the option of a single level of learning and context, or multiple options. This helped identify areas that were more appropriate for an integrated approach across different learning contexts and areas that would benefit from progressive learning (*Table 5*).

This process enabled the complexity of the RACGP curriculum to be retained – reducing its size without losing important detail. The key elements also allow a degree of flexibility for program planning to incorporate content or curriculum changes in the future (including the curriculum statements currently in draft format) without losing sight of how they link into the overall picture. Ideally this will also assist a flexible learning approach to meet the learning needs of individual registrars.

Framework for guides

In order for the guides to be meaningful in a practical sense, the prioritised learning objectives were regrouped into a number of learning outcomes, which were then clustered together under key topic areas relevant for implementation from a VMA perspective.

This produced a framework consisting of 13 key topic areas, distributed across three conceptual groups that all sit under the umbrella of the 'ethos of general practice' (*Figure 3*). The entire RACGP curriculum statements map into this framework via the learning outcomes and their linked learning objectives. While the latter are not visible in the print version of the guides, they are

Table 3. Summary of the specific learning objectives from curriculum statements that share a conceptual connection to learning objectives in the sexual health curriculum statement

Chapter	Number of linking chapters	Chapters that link into sexual health	Cross linked learning objectives	Number of cross links
Sexual health	8	Aged care	2.2.2	1
		Children and young people	3.1.2; 3.2.1; 3.2.5	3
		Disability	4.4.1	1
		Men's health	7.1.3; 7.2.1; 7.2.4	3
		Population health	9.4.3; 9.4.1	2
		Women's health	11.2.1; 11.3.1	2
		Dermatology	14.2.3	1
		Drug and alcohol	15.2.3	1
			Total number of cross links	14

Table 4. Summary of the specific learning objectives from the sexual health curriculum statement that link to learning objectives in other curriculum statements

Chapter	Number of linking chapters	Chapters linked to	Cross linked learning objectives	Number of cross links
Sexual health	10	Aged care	23.2.1	1
		Dermatology	23.2.1	1
		Disability	23.1.1	1
		Doctor's health	23.4.1	1
		Rural health	23.1.1	1
		Population health	23.3.1; 23.3.2; 23.4.2	3
		Women's health	23.1.1; 23.2.1; 23.4.2; 23.5.1	4
		GPs as teachers	23.3.2	1
		Children and young people	23.2.1	1
		Men's health	23.1.1; 23.2.1; 23.4.2	3
			Total number of cross links	17

Table 5. Prioritising three RACGP learning objectives from the sports medicine curriculum statement

Code	Learning objective	Delivery level and context	Comment
24.4.3 (Priority one)	Demonstrate use of drugs in sports practice requirements and understand the consequences of not doing this	GPT 1 Workshop	Knowledge based learning objective that would be incorporated into a prescribing skills workshop. It also embraces the ethical issues that could be used as a practical example in an ethics workshop focusing on professional behaviour
24.1.1 (Priority two)	Demonstrate advanced history taking skills including the significance of the injury to the patient	GPT 1–2 In practice	This skill based learning objective transects learning levels GPT 1 and GPT 2. It would be an appropriate area to focus on when reviewing video recorded consultations or as the basis of Objective Structured Clinical Examination practice
24.4.2 (Priority three)	Demonstrate compliance with the concept of duty of care and potential for conflict	GPT 3 In practice and/or self directed learning	This is a multilayered learning objective and requires both knowledge and skills. The concept of this learning objective is embraced by a number of other priority one learning objectives from other curriculum statements and so it is assumed that this may be a topic for discussion between supervisors and registrars if not demonstrated in the practice

available in electronic format if registrars need to access them for learning purposes, or educators want to devise a new teaching program. The topic areas link together by nine content based 'streams' that transect them.

The structure of the workshop program guide and the supervisor guides are identical (separate guides have been developed for GPT 1, 2 and 3). Each topic has an 'aim', which is consistent for that topic irrespective of the guide it appears in. It also has 'learning outcomes' that are guide specific (as they relate to both the content and context of delivery) and 'suggested content for teaching and learning' – these are guide specific (*Table 6*). The registrar guide contains the 'aim' and the tabulated 'learning outcomes' from the other two guides, with an indication of where they appear in the program (*Table 7*). The overall design concept is that it will allow for individual variation for both registrar and educator/supervisor, depending on need or the context in which they find themselves, as well as assisting them to easily identify what is not covered.

Discussion

A curriculum has to have meaning and relevance for those who will be implementing and using it,[20] especially if a 'hidden curriculum' is to be avoided.[15] The literature suggests that involving all the main stakeholders in the process is one way of achieving this.[21] For an RTP, the main stakeholders are supervisors, registrars and medical educators. While this task proved challenging, seeking continual feedback provided the opportunity to amend both the structure and content of the final guides to try to ensure greater acceptability and accessibility.

The process has also allowed the program to draw on concepts such as the 'spiral curriculum', which favours progressive learning.[22] This concept has great utility in relation to vertical integration,[23] which helps model the program changes in keeping with the needs of the practitioner of tomorrow.

This process has produced three roadmaps, which are integrated and have clearly articulated

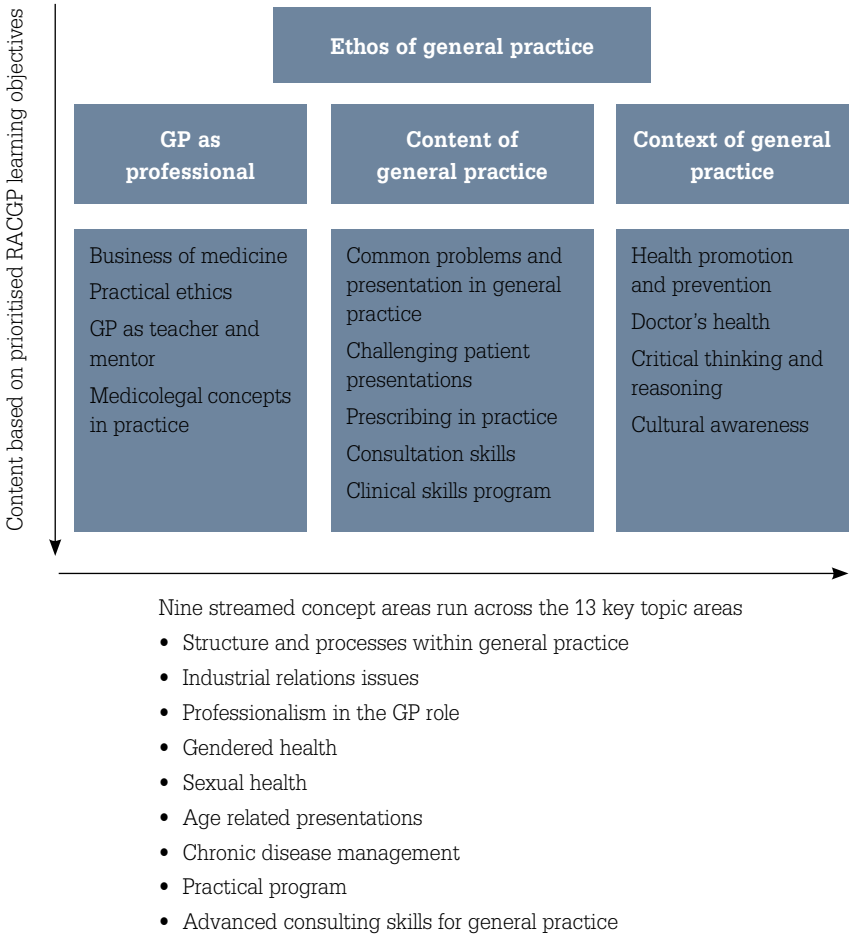

Figure 3. Framework connecting RACGP curriculum to the VMA education and training program

Table 6. A priority one (essential) learning outcome in the supervisor guide for GPT 1 – suggested teaching and learning strategies

Key learning outcomes	Teaching and learning strategies
Structure and process of general practice	
Practising as an Australian GP* (**essential**) Explain the role of general practice within the Australian healthcare system from both a clinical and public health perspective	• Encourage the registrar to reflect on the role of primary care and general practice in the wider Australian healthcare system • Outline the range of security measures required by the government for the practising GP, such as provider and prescriber numbers • Discuss the role and function of professional networks (including rural networks) and their value and purpose for local doctors (eg. Australian Medical Association, divisions of general practice, local Rural Doctors Association of Australia, and the rural chapter of the RACGP)

* Topic subheads have been developed to aid navigation of the guides. This learning outcome is grouped under the topic heading of 'The business of general practice', the aim of which is for all VMA registrars to gain an understanding of the current structure and function of Australian general practice, expertise in the application of different models of healthcare delivery, and competence in the ethical and professional application of business principles in their practise of medicine

Table 7. Example of layout for the 'Registrar guide' from the 'business of general practice' topic area

Expected learning outcome	Practice based	Workshop	Self directed
Structure and process of general practice			
Practising as an Australian GP (**essential**) Explain general practice's role within the Australian healthcare system from both a clinical and public health perspective*	Discuss with supervisor	Yes	Yes

* This learning outcome links to RACGP learning objectives that were assessed as being suitable to be acquired during the GPT 1 term but were contextually multilayered, thus registrars are given guidance that aspects of this learning outcome are suitable for workshop teaching, learning experientially and through self directed activities. In the electronic format, clicking on 'Yes' will link to the location in the program of relevant material for this learning outcome. Similarly clicking on the subhead will link to the relevant RACGP learning objectives

links to the RACGP curriculum through the VMA's blueprint. While the process has been developed within one regional training provider, it is likely to prove valuable for other training providers. Professional groups needing to adapt professional curricula to individual teaching settings may also find the model useful. Ongoing evaluation of this process within the VMA, and trialling it in other settings, will help both define and refine its use and value further.

Summary

- In the process of developing and implementing a curriculum, consultation with, and input from, supervisors, medical educators and registrars is important to ensure transparency and relevance.
- Creating a blueprint for a national curriculum that tailors it to the context in which it will be delivered, helps to keep the process focused on the needs of the registrar.
- The program guides have been developed in a systematic and rigorous way and are designed to be flexible for the registrar and adaptable to program and curriculum changes while maintaining their own integrity.

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