Educational initiatives designed to meet Australia’s future medical workforce requirements have increased the number of medical students and junior doctors in general practice, especially in rural areas. General practitioners understand the rationale for these initiatives, and many welcome the new opportunities, but it is unrealistic to expect GPs to cope with the large-scale changes involved without addressing the impact of the changes on GPs’ core role and source of income — patient care. Each initiative can seem small, but as all share the same resource — general practice and GPs — their combined impact is substantial. Large-scale change, arising from multiple smaller programs, requires support and consideration of the impact of the changes on current work practices. The potential crisis in GP teaching creates an imperative for innovations that increase capacity without reducing the quality of patient care or training.

This article outlines the current framework of general practice education within Australia and argues why this is an insufficient model for the demands now being placed on it. One alternative model for facilitating learning in general practice is suggested for implementation and evaluation.

**Traditional framework**

The Royal Australian College of General Practitioners (RACGP) began formal GP training in the 1970s. Registrars started with hospital terms and then worked alongside experienced GP supervisors. New registrars needed an orientation, face-to-face supervision and timetabled teaching, but as they developed independence, their interruptions to the supervisor’s consultations decreased. In addition, undergraduate medical students were placed for short general practice attachments, usually as passive observers. This “apprenticeship” style of training remains essentially unaltered, despite changes to the organisation and governance of GP training created by regionalisation and an alternative qualification route via the Australian College of Rural and Remote Medicine (ACRRM).

**New on-site programs**

Various programs to place learners in general practice have been created (eg, the Prevocational General Practice Placements Program). Each learner comes to general practice with an expectation of direct patient contact but with different skills and experience. Institutional support for GP supervisors varies — from paperwork and the offer of honorary academic posts to practice grants and paid teaching time. There is limited correlation between the amount of support offered to the supervisor and the educational needs of the learner.

**New off-site programs**

Initial trials of distance supervision have been consolidated by the Remote Vocational Training Scheme, and off-site supervision occurs for doctors registered under area-of-need provisions and in the ACRRM Independent Pathway. Distance supervision injects experience into isolated areas, but also creates more demand on busy GP supervisors and requires reliable equipment and connections, as well as effort to engage learners.

**Criticisms of the current educational programs in general practice (Box 1)**

**Supervisor overload**

The number of students or doctors for whom a single GP teacher may be responsible has increased in recent years. Although research has shown that supervising a single student can be time-neutral (possibly because paperwork is deferred), taking on several learners will have a cumulative effect on the teacher’s time.

**Competing demands**

To provide quality, safe patient care, medical students and junior doctors need easy access to advice from their GP supervisors. Learning requires constructive feedback based on direct observation. Yet for GPs, each interruption threatens the quality of care given to their booked patients and, in a fee-for-service system, the level of income received. Learners are aware of this potential impact, and research on interns shows that they juggle carefully their decision to ask questions.

Expecting GPs to supervise multiple learners while focusing on the increasingly complex care of patients is unrealistic. Indeed, this situation is not permitted in the United States, where in general, there should be at least one supervising family physician … who is freed of all other activities for every four residents working in the clinic … If only one resident is seeing patients … a single faculty member may be engaged in other activities to a maximum of 50%, but the teaching and supervision of the resident must take priority. Faculty time involved with medical students and other learners under the faculty’s clinical supervision should not dilute the supervision of residents.
1 General practitioner training in 2011

<table>
<thead>
<tr>
<th>Person(s)</th>
<th>Main function</th>
<th>Teaching</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP supervisor</td>
<td>• Consulting patients</td>
<td>• On demand from general practice registrar</td>
<td>• Teaching squeezed into busy schedule</td>
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<tr>
<td></td>
<td></td>
<td>• Opportunistic</td>
<td>• Increasing interruptions from juniors:</td>
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<tr>
<td></td>
<td></td>
<td>• Weekly tutorial</td>
<td>&gt; Threatens ability to care for own patients</td>
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<tr>
<td></td>
<td></td>
<td>• Supervisor provides feedback based on direct observation, plus informal feedback from the team</td>
<td>&gt; Produces expedient answers to junior doctors</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; Increases stress levels</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; Reduces supervisor’s income (which is incompletely offset by teaching income)</td>
</tr>
<tr>
<td>Medical student</td>
<td>• Consulting patients</td>
<td>• Request assistance when needed</td>
<td>• Professional silos in primary care</td>
</tr>
<tr>
<td>Prevocational doctor</td>
<td></td>
<td>• Medical student — usually no formal tutorial time in practice</td>
<td>• Loss of opportunity to promote interprofessional learning and teamwork</td>
</tr>
<tr>
<td>International medical graduate</td>
<td></td>
<td>• Prevocational doctor — an hour per week from supervisor, hospital or training provider</td>
<td>• Team sees increased stress, but cannot address it</td>
</tr>
<tr>
<td>General practice registrar and</td>
<td></td>
<td>• International medical graduate — no required formal teaching time</td>
<td></td>
</tr>
<tr>
<td>distance registrar</td>
<td></td>
<td>• General practice registrar and distance registrar — weekly tutorial</td>
<td></td>
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<tr>
<td>Health care team</td>
<td>• Consulting patients</td>
<td>• No formal role in general practice registrar’s training</td>
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</table>

Reactive supervision versus time for proactive supervision and teaching

While responding to queries is a challenge, it identifies that the learner is aware of his or her limits. Of more concern is the poorly performing learner with limited insight or inaccurate self-assessment skills. Supervisors need time to directly observe learners, and finding learners’ blind spots has been a particular challenge for distance supervisors that webcams are now helping to overcome. Finding learners’ blind spots has been a particular challenge for distance supervisors that webcams are now helping to overcome.

Last-minute arrangements for supervision

Area-of-need legislation permits doctors to work as GPs before qualifying as GPs providing they work towards gaining GP qualifications and have an on-site or distance supervisor. These doctors and their supervisors are not supported by or subject to the standards of the Australian General Practice Training program. Recruitment agencies work hard to fill health workforce gaps, but there are anecdotal reports that the employment arrangements are made well in advance of the supervision arrangements. GPs who are asked to be supervisors “at the last minute” feel torn between agreeing to supervise someone whose skills and experience they have not assessed for the needs of the proposed clinical role, and saying no and facing the ire of recruiters, the doctor and the community.

Learning and working in teams

Excellent health care relies on input from multiple professionals, and medical training should foster teamwork. Pharmacists, nurses, physiotherapists, midwives, Aboriginal health workers and receptionists all “see” the impact of a doctor’s work, but have had no formal opportunity to give feedback. The ACRRM’s innovation of using feedback from colleagues and patients in assessment recognises this, and training systems should change so that these observations and insights are routinely and positively integrated into training, particularly when the supervisor is off site.

Educational, employment and examination silos

The employment, training and granting of qualifications for international medical graduates in areas of need are organised separately. In most cases there is openness between doctors, supervisors, educators, communities and employers, and the successful completion of a college examination is a shared celebration.

However, there can be problems when a doctor is in difficulty educationally or personally. Each organisation’s requirement to maintain confidentiality overrides the alternative need for a collaborative approach to working out what is best for the doctor and the community served. For example, doctors working in areas of need may have no obligation to inform their employer or supervisor that they have attempted and failed a general practice exam. The ACRRM and the RACGP have an ethical duty not to reveal a doctor’s failure, so the community will be unaware that a GP has failed the examinations. The supervisor is left trying to supervise, but without vital information. Similarly, educational organisations running courses for doctors are not expected to report to employers if their doctor employee performed badly. Or a supervisor may become aware of a significant personal illness or problem but may not wish to jeopardise the doctor’s employment or registration by discussing this.

Distant and local consultant on-call GP supervisors — a new model

An alternative model of consultant on-call GP supervisors (CoGs) could coordinate education and training within a practice team as well as supervise senior general practice registrars at a distance. This would overcome many of the problems cited above and provide much-needed additional training capacity. CoGs would be freed from their own clinical load and their prime responsibility would be proactive and reactive facilitation of junior doctors’ work-based learning. Most of the on-call work would be during the day, when general practices are open. Options for night
cover would include reverting to current arrangements or having a reduced number of CoGs supporting a larger number of juniors.

CoGs would enact Kilminster and Jolly’s definition of clinical supervision:

The provision of monitoring, guidance and feedback on matters of personal, professional and educational development in the context of the doctor’s care of patients. This would include the ability to anticipate a doctor’s strengths and weaknesses in particular clinical situations in order to maximize patient safety.25

CoGs would need to be expert clinicians. They would be accredited through the same mechanism as that used for GP supervisors and would require training in teaching and supervisory skills. GPs recognise the benefit of teacher training,26,27 but

<table>
<thead>
<tr>
<th>Person(s)</th>
<th>Main function</th>
<th>Education</th>
<th>Requirements</th>
<th>Impact</th>
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</thead>
<tbody>
<tr>
<td>Consultant on-call GP supervisor</td>
<td>Teaching and supervision of junior doctors and medical students</td>
<td>Answers questions as needed by juniors</td>
<td>Funding:</td>
<td>CoG focuses on quality teaching without competing demands of consulting patients</td>
</tr>
<tr>
<td>Full-time role shared by GP supervisors within practice(s) or towns</td>
<td>No booked patients</td>
<td>Monitors juniors’ practice</td>
<td>➢ Around-the-clock, rotating CoGs</td>
<td>Provides career progression for experienced GPs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identifies juniors’ educational blind spots</td>
<td>Pooling of Practice Incentives Program payments for medical student teaching, Prevocational General Practice Placements Program payments and general practice registrar and remote general practice registrar supervisor allowances, plus top-up funding to bring CoGs’ salaries closer to that of hospital specialists</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coordinates weekly tutorial, plus mentoring for designated registrar</td>
<td>Collates feedback from health care team and patients</td>
<td>Facilities:</td>
<td>Improves work sustainability of experienced GPs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>➢ Office</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>➢ Computer</td>
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<td></td>
<td></td>
<td></td>
<td>➢ Webcam/videoconference</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>➢ High-speed, reliable internet access</td>
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<td></td>
<td></td>
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<td>➢ Telephone</td>
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<td>➢ Fax</td>
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<td></td>
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<td></td>
<td>➢ Administrative support</td>
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<td></td>
<td></td>
<td></td>
<td>➢ Educational training and resources</td>
<td></td>
</tr>
<tr>
<td>General practice registrar</td>
<td>Consulting patients</td>
<td>Proactive input from CoG</td>
<td>Facilities:</td>
<td>Learners confident that help available when needed</td>
</tr>
<tr>
<td>Prevocational doctor</td>
<td>Requests assistance when needed</td>
<td>Consulting room</td>
<td></td>
<td>Wisdom and experience of GP supervisors passed on to next generation of clinicians, including those in isolated communities</td>
</tr>
<tr>
<td>International medical graduate</td>
<td>Weekly tutorial</td>
<td>Computer</td>
<td></td>
<td>Patients confident of decisions made by junior doctors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High-speed, reliable internet access</td>
<td></td>
<td>Doctors learn and work interprofessionally</td>
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<td></td>
<td>Telephone</td>
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<tr>
<td></td>
<td></td>
<td>Fax</td>
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</tr>
<tr>
<td>Remote general practice registrar</td>
<td>Consulting patients</td>
<td>Proactive input from CoG</td>
<td>Facilities:</td>
<td>As for general practice registrar, prevocational doctor and international medical graduate (above), plus increased training capacity resulting from use of placements without a resident supervisor</td>
</tr>
<tr>
<td></td>
<td>Requests assistance when needed</td>
<td>Computer</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weekly tutorial</td>
<td>Webcam/videoconference access to CoG</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>High-speed, reliable internet access</td>
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<td></td>
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<td>Telephone</td>
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</tr>
<tr>
<td>Medical student</td>
<td>Observing CoG, GPs in practice and general practice registrar</td>
<td>Proactive input from CoG</td>
<td>Computer access, web access to university</td>
<td>Positive experience of immersion in clinical practice</td>
</tr>
<tr>
<td>Consulting patients</td>
<td>Requests assistance when needed if consulting patients</td>
<td></td>
<td></td>
<td>Progresses from observation to participation as skills develop</td>
</tr>
<tr>
<td></td>
<td>Weekly tutorial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health care team</td>
<td>Consulting patients</td>
<td>Formal interaction and feedback mechanism within team</td>
<td>Validated feedback tools</td>
<td>Improved teamwork and interprofessional learning</td>
</tr>
</tbody>
</table>

GP = general practitioner. CoG = consultant on-call GP supervisor.
have cited the need for dedicated time and financial support to
study.28 CoGs would maintain currency and credibility as GPs by
doing part-time clinical work.

CoGs would be involved in recruiting and placing potential
trainee doctors, planning practice-based teaching, actively moni-
toring the quality of patient care and seeking doctors’ blind spots
(eg, by audit or video observation). CoGs would support juniors
faced with an on-site medical emergency, but responding to off-site
emergencies would be limited to advice only. Good emergency
skills would be a prerequisite for a doctor under distance supervi-
sion. Using fair and transparent systems, CoGs would collate
feedback from the health care team and patients about learners
and would encourage direct informal communication and learning
among team members. CoGs would liaise with learners, educa-
tional institutions, colleges and employers, and learners would
understand the rationale that this was best for patient safety and
their long-term career.

Patients would be reassured that seeing the junior in a practice
was a safe option, and the CoGs involvement might help to
preserve continuity of care.29 The CoG model could provide senior
doctors with the flexibility and career progression needed to
sustain them in the workforce30 and prevent their early retirement
and loss of their wisdom from general practice. The CoG role
might rotate between senior doctors in one practice or across
practices in a town or region. In a rotating system, one CoG would
be designated as a learner’s main supervisor/mentor.

Funding and resources
Funding this model will require resources from the education and
workforce sectors and is a potential sticking point, but without
extra resources the investment in medical school places and junior
doctor programs is a potential waste. Educational funding should
flow to the site of the education — general practice.

The salary for CoGs should be set at the GP consultant level. The
MABEL (Medicine in Australia: Balancing Employment and Life)
survey showed that average earnings were $316 750 for specialists
MABEL (Medicine in Australia: Balancing Employment and Life)
flow to the site of the education — general practice.

Education funding should for comments on earlier drafts of my article. The article does not necessarily
reflect their opinions or those of other past or current colleagues and
employers.

Competing interests
I am a GP trainer for Northern Territory General Practice Education and a
preceptor for Flinders University medical students in general practice. I am a
teacher for the Flinders University Master of Clinical Education course and
have been a medical educator and supervisor for the Remote Vocational
Training Scheme.

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Summary
A model of consultant on-call GP supervisors and an expansion of
distance supervision of senior general practice registrars could
address many of the issues facing general practice education.
Funding, information technology and detailed evaluation of this
innovation would be needed to test its ability to provide effective
educational supervision and quality patient care. Australia’s invest-
ment in increased medical student places will be an expensive folly
unless general practice teachers are supported.

Acknowledgements
I would like to thank Nina Kilfoyle, Jenny May, Louise Stone and Tim Skinner
for comments on earlier drafts of my article. The article does not necessarily
reflect their opinions or those of other past or current colleagues and
employers.


