

# Preparation for general practice vocational training: time for a rethink

Changes may be needed to facilitate GP registrars' transition into general practice

**F**ormal training for general practice in Australia began with Commonwealth funding of the Family Medicine Program in 1973.<sup>1</sup> Future general practitioners worked in hospital specialties relevant to general practice, and then learned while working as GPs, under supervision, in accredited training practices. Since then, general practice and hospital medicine have changed significantly, but the GP colleges' requirements for hospital experience ahead of GP training remain. Given the bottleneck in hospital junior doctor training positions, and junior doctors' concerns that their stressful, demanding workloads are of questionable educational value, it is timely to reconsider the effectiveness of this preparation for general practice.



## Hospital practice

Changes in hospital practice have altered the educational experience for junior doctors.<sup>2</sup> The welcome reduction in working hours has lowered their volume of clinical experience<sup>3</sup> and their experience of continuity of care.<sup>4</sup> Technological advances have shortened patients' admissions, and efficiency pressures exacerbate this trend. GPs are now expected to manage non-life threatening problems after discharge, which creates fewer opportunities for hospital juniors to manage such illnesses. Specialists have subspecialised, so juniors' work may focus on one aspect of practice, such as breast surgery, rather than general surgery, which leaves gaps in their experience of other common surgical conditions seen in general practice. Shift work has eroded the "clinical firm" and decreased the opportunity for senior practitioners to monitor the educational development of junior doctors. Junior doctors now provide episodic care, and lose sight of how patients progress over time.

An increased focus on patient safety has demanded specialists lead clinical decisions. This switch, in addition to the larger number of junior doctors, means that juniors make fewer clinical decisions. At present, undergraduate medical students are tested more on specific competencies and less on their ability to synthesise information to make clinical decisions. The illness scripts that juniors develop are for a very different spectrum of illness<sup>5</sup> than seen by GP registrars,<sup>6</sup> increasing the potential for diagnostic and management errors<sup>7</sup> as the lower likelihood of serious disease reduces the predictive value of diagnostic tests.

## General practice

General practice is a scientific discipline with its own curricula, consultation style,<sup>8</sup> skill set and holistic approach to diagnosis and management.<sup>9</sup> GPs' longitudinal care for patients lowers mortality<sup>10</sup> and may reduce hospital admissions.<sup>11</sup> Managing uncertainty and

considering the psychosocial and cultural context of illness are key skills. GPs' work is increasingly complex, with consultations covering more issues and more activity per issue; GPs now provide health promotion and manage acute and chronic illness and multimorbidity,<sup>12</sup> with its accompanying polypharmacy.<sup>13</sup>

After completion of hospital terms, GP registrars commence work in what is referred to as an apprenticeship model of training. However, registrars have significant clinical independence and equal access to pathology and radiology tests, prescribing, and Medicare billing as their senior GP colleagues. They run clinical consultations and call their supervisors for assistance when needed. Registrars work in a community of practice, but the observation and role modelling from experts, and the graded increase in work complexity according to proven skills — hallmarks of an industrial apprenticeship<sup>14</sup> — rarely occur. GP registrars describe the transition from hospital as scary and isolating.<sup>15</sup> Anecdotally, supervisors report that new GP registrars are more anxious, have reduced repertoires of the illness scripts needed in general practice, and have fewer skills in making decisions and managing multimorbidity.

## The Registrars Clinical Encounters in Training (ReCEnT) project

The ReCEnT project — an ongoing cohort study of Australian GP registrars' consultations — provides information on registrars' clinical activity and insight into their learning needs. Once each 6-month training term, GP registrars record data from 60 consecutive consultations. They document their casemix, clinical management and whether they sought information or assistance, or generated learning goals to be pursued after the consultation. A synthesis of the data from over 200 000 consultations between 2010 and 2016 is shown in **Box 1**. **Box 2** describes our inferences from these data and other focused clinical analyses of GP registrars' most substantive content gaps.

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**1 General practitioner registrar's educational gaps as identified by the Registrars Clinical Encounters in Training (ReCEnT) project data**

	Information sought during consultation from any source <i>n</i> = 84 723* <sup>16</sup>	Information sought during consultation from a supervisor† <i>n</i> = 84 723* <sup>17</sup>	Learning goals generated <i>n</i> = 154 746* <sup>18</sup>
<b>Questions generated</b>			
Within consultations	20.6%	9.2%	22.1%
Diagnosis	9.9%	11.7%	
Management	61.3%	53.1%	
Diagnosis and management	28.8%	35.2%	
Associations with patient or condition characteristics	<ul style="list-style-type: none"> <li>• Younger patient</li> <li>• The patient not having been seen for this problem previously</li> </ul>	<ul style="list-style-type: none"> <li>• Aged &lt; 15 and ≥ 65 years</li> </ul>	<ul style="list-style-type: none"> <li>• Chronic problem</li> <li>• Younger patient</li> <li>• Aged ≥ 65 years</li> <li>• The patient having been seen for this problem previously</li> </ul>
<b>Most common ICPC-2 chapters that generated learning goals or information seeking</b>			
Skin	16.0%	20.0%	12.9%
Musculoskeletal	10.8%	12.6%	12.7%
Respiratory	10.7%	7.5%	8.7%
Digestive		7.5%	
Psychological		6.9%	
General and unspecified	12.7%	12.0%	11.5%
<b>ICPC-2 chapters with highest proportion of learning goals generated per problem seen</b>			
Male genital			31.8%
Neurological			27.0%
Eye problems			23.3%
Blood, blood from organs and immune mechanisms			22.1%
<b>Individual conditions that generated most learning goals</b>			
Depression			1.9%‡
Hypertension			1.7%‡
Asthma			1.3%‡
URTI			1.0%‡
Anxiety			0.9%‡

ICPC-2 = International Classification for Primary Care, version 2. URTI = upper respiratory tract infection. \* Number of consultations. † Generally reflecting a need for more complex or contextualised in-consultation information or advice. ‡ Of all learning goals. ◆

Entrants to a training program are expected to have educational gaps. Our research did not determine the relative proportion of questions about “content knowledge” versus “contextual knowledge and practical application of knowledge”, but more questions were asked about management than diagnosis. It is potentially inefficient for supervisors to teach one-to-one, common general practice topics that could be learned in other ways, perhaps before starting practice, whereas passing on supervisors’ accumulated wisdom of the art of practice is entirely appropriate. Hospital-based experience traditionally gave juniors basic content and experience in making clinical decisions. Our contention is that structural changes have eroded hospitals’ performance of this function and, consequently, GP supervisors must address these learning needs. This change in training may limit teaching about higher-level GP-specific material, such as using time as an investigative tool; providing integrated, ongoing, whole-patient care; and identifying

and synthesising medical and patient priorities for care when disease-specific guidelines conflict.

**Ideas for the future**

There are learning opportunities within the current system which may ease GP registrars’ transition to general practice. We outline options for consideration, ranging from individual to more significant structural changes.

**Raising awareness of the clinical knowledge needed by GPs**

Information regarding GP registrars’ priorities for learning could be made available to future GP registrars before commencing training. Junior doctors could use this information to tailor their personal study, just as is expected in other specialty training programs (eg, surgery), and hospital junior doctor education programs could incorporate the learning needs of future GPs.

## 2 Types and examples of general practitioner registrars' educational gaps

Type of educational gap	Examples
High prevalence conditions of which ongoing management in general practice differs from acute presentations in hospital	<ul style="list-style-type: none"> <li>• Diabetes and hypertension<sup>19</sup></li> </ul>
High prevalence general practice conditions that rarely present acutely in hospital	<ul style="list-style-type: none"> <li>• Acute otitis media</li> <li>• Sore throats</li> <li>• Back pain</li> <li>• Eczema, skin infections and skin cancers<sup>20</sup></li> </ul>
Moderately common conditions that rarely present acutely in hospital and are infrequently seen or taught as part of the undergraduate curriculum	<ul style="list-style-type: none"> <li>• Eye disease<sup>21</sup></li> <li>• Developmental and behavioural problems in children<sup>22</sup></li> </ul>
Discipline-specific content	<ul style="list-style-type: none"> <li>• General practice computer systems</li> <li>• Medicare Benefits Schedule</li> <li>• Pharmaceutical Benefits Scheme</li> <li>• Specialist referrals</li> </ul>

### Learning activities

**Learning resources.** The GP colleges' and GP training organisations' educational materials on priority topics could be made available to GP registrars ahead of and during training.

**Direct observation of GPs.** Junior doctors who have limited prior exposure to Australian general practice (eg, international medical graduates) could observe senior GPs before commencing training. This experience would enhance their understanding of the knowledge and skills needed in general practice and would help them target their hospital learning to their future career.

**Outpatient clinics.** Junior doctors' roles focus on inpatient care. Attendance at outpatient clinics in areas of known importance for GP registrars (even if not linked to junior doctors' current hospital term), such as dermatology,<sup>20</sup> otorhinolaryngology, ophthalmology,<sup>21</sup> paediatrics,<sup>23</sup> fracture clinics, rheumatology and rehabilitation, could be trialled.

**Follow-up of referrals.** Future GP registrars could be paged to present their management plan, and then observe and learn from specialists who conduct intrahospital referrals.

**Direct observation of hospital staff.** Valuable skills can be learned from understanding how each health team member contributes to patient care. For example, midwives, hospital pharmacists, social workers, audiologists and podiatrists have skills to teach future GPs.

### Assessing clinical knowledge

The selection of GP registrars could include the clinical knowledge regarding common problems seen in general

practice. This would reassure supervisors of registrars' core knowledge and would show registrars the gaps they need to address. Since drafting this article one GP college has introduced such a test.<sup>24</sup>

### Increasing exposure to general practice during training

Some states and territories support junior doctor training in general practice and the new Commonwealth Junior Doctor Training Innovation Fund will enable more rotations in general practice in the early postgraduate years.<sup>25</sup> Research on the outcomes of this cohort could inform future decisions on the optimum length or necessity of hospital training.

### Reconfiguring GP training

An increased knowledge of GP-relevant content should assist GP registrars, but solo consultations from day one may be unrealistic — the explicit recognition that GP registrars are learners has merit. An extended orientation co-consulting with GP supervisors could ease registrars' anxiety and facilitate their learning on how to make clinical decisions, using time and safety netting amid uncertainty.<sup>9</sup> This approach would need more support for GP supervisors in their guidance and teaching roles, particularly at the start of training.

The United Kingdom is considering whether medical training needs to be shorter, broader and more geared towards creating generalists who can deal with multimorbidity.<sup>26</sup> Canadian<sup>27</sup> and Dutch GP registrars<sup>28</sup> are based in the community, and only work in hospitals for specific terms with defined learning outcomes. Such major structural change would require collaboration between professional colleges, jurisdictional and federal governments, and GP training organisations, but may prove more effective and efficient than less well targeted years of junior doctor hospital experience for GP registrars.

### Conclusion

Changes in hospital practice have reduced the breadth of experience that hospitals can give to future GPs. We have proposed options to improve GP registrars' knowledge and skills in common or important general practice presentations before GP vocational training. Facilitating better preparation for and transition into general practice makes sense for patients, GP registrars, GP supervisors, training practices and regional GP training organisations.

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