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# Choosing general practice as a career

## The influences of education and training

### Background

In Australia, most medical students graduate without a firm career choice, with this decision being made during their early postgraduate years. Strategies addressing the current lack of meaningful exposure to general practice during these formative prevocational years are likely to be the most effective in increasing the proportion and number of entrants to general practice.

### Objective

This review summarises the influences of medical student selection criteria, curriculum, geographical location, timing and duration of general practice exposure and experience, prevocational experience, and vocational training, on an eventual choice of general practice as a career.

### Discussion

These are important influences on the complex process of career choice. Much research has focused on isolated interventions at one point along the pipeline. Varied and conflicting conclusions emerge from individual studies. In complex systems it is hard to understand the influence of an isolated intervention without looking at the system as a whole.

■ **This review draws from the conventional literature. It was performed as part of a larger study that also used stakeholder interviews, grey literature (reports, position papers, planning documents and nonpeer reviewed findings) and opinion summaries, and reviews of the marketing and consumer choice literature, to report on the determinants of career choice.**

Databases accessed included PubMed, Medline and Cinahl. Snowballing – identifying further articles identified from the reference lists and associated links of retrieved articles – added to the yield. Articles citing retrieved literature were also sought. Search terms included: ‘medical students’, ‘prevocational doctors’, ‘general practice’, ‘family medicine’, ‘career intention’ and ‘recruitment’, and these were augmented with keywords associated with previously retrieved articles.

Retrieved peer reviewed articles were examined for relevance and methodological quality. Australian articles were most relevant, but international studies from countries with similar structures of primary care and general practice, or with similar workforce and recruitment issues, were deemed relevant. Relevant reports published by Australian agencies and other institutions were examined. Articles were reviewed independently by four project staff, then collectively in a 2 day workshop at which emergent themes were identified. The workshop generated a further search and also informed key stakeholder interviews. This iterative search, the inclusion of material derived from a range of methodologies and sources, and subsequent descriptive and thematic analysis is best described as a narrative synthesis.<sup>1</sup> This is an appropriate approach to a complex topic, where the results of qualitative and quantitative studies, statistics, expert opinion, value judgment and anecdote need to be related.<sup>2</sup> In comparison to traditional systematic reviews, the steps in narrative synthesis are nonlinear, iterative and the heterogeneity of opinion and findings is explored descriptively rather than statistically.

## Influences during primary and secondary education

There is consistent evidence that students of rural origin are more likely to return to rural areas on graduation, and are more likely to work in generalist medical disciplines.<sup>3–6</sup> This has translated into current policies giving priority in medical school entry, or financial and other support during study, to students of rural origin. Most of this research, and its incorporation into policy, has been undertaken to address rural workforce shortages rather than concentrating on general practice recruitment.

There are potentially significant influences during secondary education which drive career choice, and for some individuals the career die may be cast, with an interest in primary care at the time of matriculation perhaps the strongest predictor of eventual general practice career.<sup>7</sup>

## Influences via selection of medical students

Selection processes and criteria for entry into medical school have changed considerably over the past 2 decades, moving away from selection based exclusively on academic performance to a broader assessment of attributes and competencies for medical practice. A second change is the growth in graduate entry courses which will provide 45% of Australian medical graduates in 2012 (from a base of zero in 1996).<sup>8</sup> There is also an increase in the proportion of female entrants; while women have been in the past more likely to choose general practice than their male peers, this appears to be changing.<sup>9</sup>

The change to graduate entry may have transiently increased the number of students interested in a general practice career but overall the changes are not significant.<sup>10</sup> Graduate entry has been associated with an increased average age of entry, but age at entry into medical school was not a significant predictor of career choice.<sup>11</sup>

Recent articles in the Australian medical press point to differences in the proportions of alumni choosing general practice as a career, and relate this to the selection criteria, location and philosophy of the medical school of graduation. A survey of medical school websites does suggest that medical schools vary in the extent to which they perceive and project themselves as having a focus on producing doctors working in primary care.

A broader consideration of the influence of entry criteria on eventual career choice would also look at the increasingly complex mixture of financial variables on entry. Entry requirements may be modified according to the financial contribution the student is prepared to make. Bonding or other long term commitments may also impact on the attributes and qualities of students on entry, and the financial and other commitments on exit. The effect of these changes on the proportion of graduates choosing general practice as a career remains unclear.

## Influences during medical school

Stated and hidden curricula, role models and the physical and professional environments in which education is delivered may all influence career choice.

Locations of study may predict the ultimate geographical destination of practice. Rural background, rural education and training experiences,

and rural scholarships or cadetships continue to be predictors for rural work location for postgraduate doctors.<sup>4,12</sup> Compulsory rural placements may increase intentions to ultimately practice in a rural location.<sup>13</sup> Noncapital city locations are likely to have more generalist opportunities than specialist, but the effect of the establishment of new medical schools in regional and rural areas in influencing more graduates to choose general practice remains unclear.

There are mixed conclusions about different curricula's ability to influence choice of a primary health care career. There is greater agreement on the influence of negative and positive experiences of particular disciplines and the importance of exposure to role models during medical school.<sup>6,9,14–17</sup> There are increasing expectations regarding the amount of teaching undertaken by general practitioners within primary care,<sup>18</sup> with some evidence that positive student experiences may influence career choice toward general practice.<sup>19,20</sup> There is also awareness of significant capacity and resource issues that must be addressed<sup>21,22</sup> to produce positive experiences.

Only a minority of Australasian and British medical students have a definite career choice at graduation, with it taking 1–2 years after graduation before the majority have committed to a discipline.<sup>23–26</sup> In contrast, a high proportion of students nearing graduation from Canadian and United States medical schools have chosen their career. This reflects the need to select elective terms in medical school in preparation for streamed residencies – they make their minds up earlier because they have to.

## Influences during prevocational training

The attitudes of senior colleagues and peers, positive and negative role models, and experience working in disciplines at this stage continue to influence eventual career choice.

Surveys of participants in the Prevocational General Practice Placements Program (PGPPP), where interns or residents spend a rotation in general practice, suggest that this experience exposes participants to positive experiences and role models, is clinically useful,<sup>27</sup> and a positive formative experience.<sup>28</sup> There is little information yet about whether this translates into a higher proportion of doctors choosing a general practice career. Given that an important influence in career choice is experience gained through rotations,<sup>23</sup> it may be essential for graduates to work in general practice for the discipline to successfully compete with other specialties. There are significant challenges already in teaching and supervision in Australian general practice.<sup>29</sup> Other specialties are also likely to embrace private clinical settings for prevocational training and experience.<sup>30</sup>

Lessons from the introduction of the foundation framework in the United Kingdom, which underpin the prevocational years of practice, include the need for changes in career paths and structure to be clearly communicated and discussed, and adequately resourced.<sup>31</sup>

## Influences during vocational training

The influence of current general practice training programs on career choice has not been studied and vocational trainees have

apparently already made their career choice. However, vocational training experiences may reinforce commitment to general practice as a vocation, or contribute to a decision to change career. How medical students and prevocational doctors perceive the structure and rewards of vocational training for general practice may influence their eventual career choice.

Ease of entry into training, and the duration of training, were factors that positively influenced a decision to enter general practice.<sup>23,25</sup> The positive and negative aspects of general practice training have been explored,<sup>32,33</sup> but there is room for research on the effect of the current configuration of general practice vocational training on career choice.

## Discussion

Overall, an individual's experience of medical education and training is a significant external influence on eventual career choice but it is challenging to determine the influence of individual components. Only a small percentage of medical students have firm career intentions at entry. There is strong evidence that students of rural origin are more likely to return to rural areas after graduation and choose more generalist careers. The influence of other entry criteria, university, and curriculum is less clear. Meaningful analysis of the degree to which different medical schools produce different practitioners is not yet possible. Potential medical students possibly make largely pragmatic decisions on where to apply to study medicine.

Most decisions about career are made in the prevocational years. There is little value in putting efforts into high school or early medical training unless these are linked with effective opportunities for general practice exposure and experience in the prevocational years.

Many of the changes proposed, or already in place, to deal with increasing numbers of students and graduates may increase the profile of, and exposure to, general practice. Medical education and training changes move students and training from the hospital to the community and general practice. Institutions and individuals responsible for education and training must ensure general practice is resourced appropriately to ensure positive experiences.

There may be a 'will' for general practice to be involved in education and training, but is this supported by a 'way'? There are dangers for career attractiveness if prevocational placements are driven by workforce considerations, as it may lead to prevocational doctors being placed in the practices least able to devote the time and resources required for effective supervision and a well supported exposure to the discipline. The initial positive PGPPP evaluations may reflect the enthusiasm of the small number of early adopters; 0.13% of practices involved in PGPPP compared with 20% of practices involved with vocational training.<sup>29</sup>

## Conclusion

The influence of medical student selection criteria, curriculum and institution is unclear from current evidence. Continuing and increased efforts to recruit more students of rural origin may increase the number of entrants to general practice. The geographical location of education

and training and the quality of medical student experiences in general practice influence career choice.

Appropriately timed, relevant, positive exposures to general practice and its practitioners may lead to more individuals considering it as a career. Integrated changes and influences along the pipeline of education and training are likely to be the most effective in increasing the attractiveness of general practice as a career choice; isolated interventions without reinforcing changes at other stages of education and professional development are less likely to bear fruit.

In Australia, most medical students graduate without a firm career choice, and it is during early postgraduate years that these decisions are made. Strategies addressing the current lack of meaningful exposure during these formative prevocational years are likely to be the most effective in increasing the proportion and number of entrants to general practice.

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