

# Policy Brief

Centre for Research Excellence in Medical Workforce Dynamics

Issue 2, 2014

## A Fork in the Road? A Review of Factors Influencing Medical Career Choices\*

Anthony Scott, Catherine Joyce, Terence Cheng and Wei Wang

Centre for Research Excellence in Medical Workforce Dynamics

The University of Melbourne and Monash University

### Aims and background

- The aim of this Policy Brief is to examine factors influencing the career choices of medical practitioners.
- In a context of rapid graduate expansion and more intense competition for pre-vocational and vocational training positions, it is important to understand what evidence is available to inform policy interventions designed to influence career choices.
- This is especially important in influencing decisions to practise in those specialties and locations which are predicted to be in shortage.
- The literature on medical career decision making from 2005 was reviewed, with a focus on empirical Australian studies. Twenty Australian studies and 189 overseas studies were found.

### Why is this important?

Medical career paths are a key element in determining access to and costs and outcomes of the health care system. The career decisions that are made by medical practitioners determine their eventual skills, numbers, distribution and location of practice. The structure of careers, including the structure and length of training, and the structure of promotion and rewards at different career stages, can also provide incentives to influence not only career choices and trajectories, but the costs and quality of care provided.

Policy makers wish to know how they can influence career paths to lead to a more efficient and equitable distribution of medical practitioners across specialties and geographic locations (Health Workforce Australia, 2013). Increasing

the numbers of medical graduates will not address mal-distribution and is likely to lead to oversupply unless other policies are also implemented to change career paths and persuade medical practitioners to work in specialties and areas of likely future shortage.

Large scale graduate expansion in Australia will alter the career trajectories of medical practitioners as bottlenecks and increased competition in the training system mean that all doctors cannot progress as quickly to specialist status, and some may not progress at all (Marshall, 2007). How these junior doctors will be supported requires an understanding of when and how career decisions are made.

The availability and characteristics of different career paths and job opportunities are determined by employers, (e.g., health care organisations and governments) and the opportunities for self-employment. Regulation has a strong role to play in the medical care career structure and labour market. For example, employer bargaining

\* This Policy Brief is based on an Evidence Check Review brokered by the Sax Institute ([www.saxinstitute.org.au/publications/evidence-check-library/medical-career-path-decision-making/](http://www.saxinstitute.org.au/publications/evidence-check-library/medical-career-path-decision-making/)) for the NSW Ministry of Health in 2013.

agreements define the structure of salary scales, promotion, and the flexibility that employers have to attract and retain medical practitioners by offering higher remuneration, better working conditions, or different types of jobs. These structures play a role in influencing the relative attractiveness of different career paths.

Well-functioning labour markets also rely on good quality information about careers and the jobs on offer to candidates and employers. Markets with poor or inaccurate information will lead to employers and job candidates to potentially make the wrong decisions.

## What is known about how to influence medical career choices?

- The evidence reviewed was of low quality. Most studies were either descriptive/qualitative or cross-sectional surveys, with only a few but very poorly designed intervention studies.
- Three main groups of factors have been shown to be associated with career choices. These factors are summarised in the table.

## Information and experiences

- The preferences of medical students and doctors in training can potentially be influenced by the

information they receive and their experiences throughout their training.

- They are more likely to rely on informal information from peer groups, supervisors and experience in placements. There is some weak evidence that the quality of supervision is associated with eventual career choices. There is also weak evidence from overseas that data on the availability of positions in each specialty training program and specialty may influence decisions.
- The evidence on the impact of more formal career advice and support and the role of mentoring programs is non-existent or too weak to make any conclusions.
- Undergraduate placements can have some influence, especially where the quality of supervision is high and for those placements towards the end of medical school.

## Changing the structure of medical careers

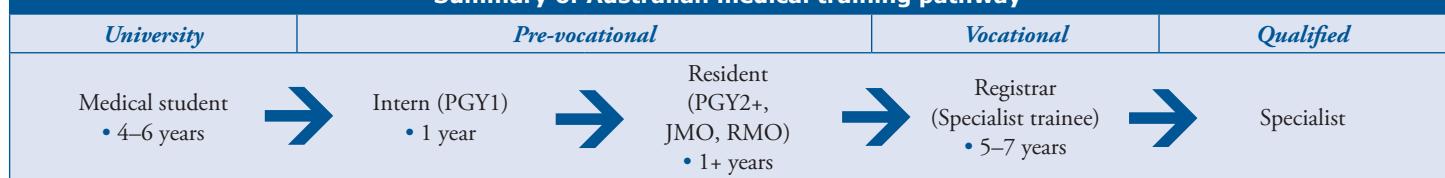
- Employers and government can alter the structure and nature of training and careers, and this can influence the availability and characteristics of career options. For example, Modernising Medical Careers in the United Kingdom shortened the length of medical training to accommodate increased graduates, but it remains

**Factors associated with career choices in medicine**

<i>Characteristics of students and graduates</i>	<i>Characteristics of education and training</i>	<i>Job characteristics</i>
<ol style="list-style-type: none"> <li>1. Age</li> <li>2. Gender</li> <li>3. Rural background</li> <li>4. Personality</li> <li>5. Attitudes and values</li> <li>6. Work-life balance preferences or family factors</li> <li>7. Socio-economic background</li> <li>8. Personal interests</li> <li>9. Skills, abilities and aptitudes</li> <li>10. Peer and social networks</li> </ol>	<ol style="list-style-type: none"> <li>1. Amount of exposure to different specialties</li> <li>2. Quality of training and supervision</li> <li>3. Role of mentors and supervisors</li> <li>4. Career information and support (e.g., workshops, information)</li> <li>5. Education debt (cost of training)</li> <li>6. Structure and regulation of training</li> <li>7. Number and distribution of training places</li> </ol>	<ol style="list-style-type: none"> <li>1. Expected future earnings</li> <li>2. Procedural work</li> <li>3. Continuity of care or type of patients seen</li> <li>4. On-call commitments</li> <li>5. Hours of work</li> <li>6. Opportunities for academic work or intellectual stimuli</li> <li>7. Reputation or status amongst peers</li> <li>8. Reputation or status amongst the community</li> <li>9. Opportunities for self-employment or autonomy</li> </ol>

Source: Scott et al. (2014).

**Summary of Australian medical training pathway**



Note: PGY = postgraduate year; JMO = Junior Medical Officer; RMO = Resident Medical Officer.

Source: Health Workforce Australia (2013).

unclear what effects this has had on the quality and cost of training or on career trajectories.

## When to intervene

- The early postgraduate years appear to be the time when most doctors in training decide on their specialty training program in Australia. Around 15 per cent report being certain of their specialty at the end of medical school. There is evidence from the United Kingdom that those who are certain of their choice early in their careers are highly likely to end up working in that specialty.

## What influences specialty choice?

- Most studies that were reviewed focused on specialty choice. Those studies that asked respondents to rate the importance of a list of factors were fairly consistent in their findings. For the factors that were actionable through policy change, work experience and the flexibility of hours were most highly rated, with financial aspects least highly rated. However, there was some evidence that financial aspects were most important for those who were uncertain about their specialty and for those interested in surgery. The one Australian study that focused more on expected future job characteristics found avoiding on-call work, higher earnings, procedural work, control over hours and academic research opportunities were important determinants of specialty choice, with on-call work being the most important factor. Though student debt is less of an issue here than in the United States, this study found that the importance of earnings in influencing specialty choice was higher for those with more student debt.
- The factors associated with career choice vary across specialties. For general practice, there is weak evidence that the length and quality of clinical attachments may play a role.
- Rural background has consistently been shown to be associated with rural practice, from a range of studies across different countries. The influence of rural-based training and educational experiences is also often cited, but the evidence to support this is weak as these studies do not control for rural background.

## Recommendations

- There is a clear need for higher quality research in this area. This includes research on the impact of changes to medical education and training, research on how to influence the preferences of junior doctors, and research on how changing the job characteristics of specialties can influence career choice. This requires not only

investment in longitudinal data collection that maps, follows and understands medical careers, but urgent investment in the research skills of those undertaking such research.

- Any interventions to influence the preferences of junior doctors should take place in the early postgraduate years, and should be properly evaluated using rigorous methods.
- Areas of intervention worth exploring further include:
  - the quality of supervision during training, including the role and nature of training for supervisors;
  - providing information on the chances of obtaining a specialty training place; and
  - the provision of unbiased career information through trusted supervisors.
- The strong association of rural practice with rural background suggests a stronger role for considering rural background in medical student selection. The role and impact of rural-based clinical training need to be more thoroughly evaluated.

## Conclusions

This Policy Brief has summarised the evidence on the extent to which medical careers can be influenced by employers and government. Overall, there is no empirical evidence that suggests that career choices can or cannot be influenced this way. This is because the quality of the evidence is very poor, with only a few intervention studies that have been poorly designed. There is no evidence on the impact of career advice or the source of career information. The full Evidence Check Review can be found at [www.saxinstitute.org.au/publications/evidence-check-library/medical-career-path-decision-making/](http://www.saxinstitute.org.au/publications/evidence-check-library/medical-career-path-decision-making/).

There is, however, a much larger literature based on cross-sectional surveys and qualitative research that suggests which factors were likely to have influenced career choices. At best, this literature is suggestive of further avenues of exploration in the design of interventions to influence career choices.

## References

- Health Workforce Australia (2013). National Medical Training Advisory Network: Discussion Paper. Health Workforce Australia: Adelaide.
- Marshall M (2007). The future for trainee doctors. *British Medical Journal* 2007;335(7632):1222–1223.
- Scott A, Joyce CM, Cheng TC, Wang W (2014). Medical Career Path Decision Making: A Rapid Review. Evidence Check Review. Sax Institute: Sydney.

# Interested in conducting research using MABEL data?

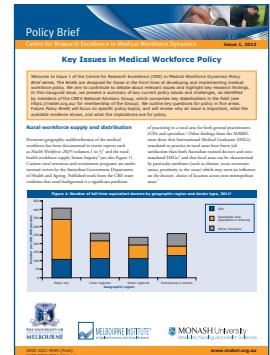
The Centre for Research Excellence in Medical Workforce Dynamics supports the wider use of data from the MABEL survey for research and policy. We can conduct bespoke analysis on your behalf, or you can analyse the data yourself by applying for de-identified data from all five currently available waves (2008 to 2012). There are over 100 users of the MABEL data, who are examining a range of topics such as job satisfaction, doctors health, earnings and career paths. MABEL data for GPs are now also available in maps. The data have been aggregated to Medicare Local level through the National Centre for Geographic & Resources Analysis in Primary Health Care (GRAPHC); see [mabel.org.au/maps.html](http://mabel.org.au/maps.html). Visit the MABEL website for more details on how to access the data: [mabel.org.au/data.html](http://mabel.org.au/data.html).



Participants at the Inaugural MABEL Research Forum, April 2013

## Policy Brief No. 1: Key Issues in Medical Workforce Policy

Issue 1 of the Centre for Research Excellence (CRE) in Medical Workforce Dynamics Policy Brief series was released in 2013. The Briefs are designed for those in the front lines of developing and implementing medical workforce policy. We aim to contribute to debate about relevant issues and highlight key research findings. In the inaugural issue, we presented a summary of key current policy issues and challenges, as identified by members of the CRE's National Advisory Group, which comprises key stakeholders in the field (see <https://mabel.org.au/> for membership of the Group). We outlined key questions for policy in five areas: rural workforce supply and distribution, education and training, career transitions, medical workforce participation, and models of care and skill mix. Future Policy Briefs will focus on specific policy topics, and will review why an issue is important, what the available evidence shows, and what the implications are for policy.



## About the Centre for Research Excellence in Medical Workforce Dynamics

The Centre for Research Excellence (CRE) in Medical Workforce Dynamics is a collaboration between the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne and Monash University, and is funded by the National Health and Medical Research Council. The CRE has four key objectives: to describe and understand the determinants of trends in key measures of the labour supply of doctors; to evaluate and simulate the effects of policy change; to support and enhance knowledge exchange and the use of our research in applied contexts; and to build capacity in health workforce research.

The Medicine in Australia: Balancing Employment and Life (MABEL) national longitudinal survey of doctors is one of the CRE's primary activities. MABEL has, since its inception in 2007, established itself as a national resource for medical workforce research with a growing international reputation. Work currently underway addresses many of the key questions outlined in this Policy Brief, under the three themes of the CRE's research program: rural workforce supply and distribution, career transitions, and workforce participation.

**Do you have a comment or a suggestion for a future Policy Brief?**  
**Contact us at [enquiries@mabel.org.au](mailto:enquiries@mabel.org.au)**

