Medical careers – nature or nurture?

Tim J Wilkinson

There’s a degree of satisfaction when one sees a gap in medical education being identified, an evidence-based intervention put in place, and then the whole thing evaluated to see if it’s working as planned. Such is the case with incentives to increase the rural medical workforce.

In general, there are three pillars to influencing medical workforce, that all have to be aligned: select the right people, give them the right experiences during medical school and in postgraduate training, and provide incentives for people to work there after qualification. Rural medical workforce initiatives are no different. It has been well described internationally that choosing a medical career in a rural setting is more likely if the person comes from a rural background, has rural experiences during training and if the job at the end is sufficiently attractive.¹ There are additional, not insubstantial, social influences such as where one’s spouse wants to live and work.

Some medical schools claim it is not their role to influence the medical workforce. Fortunately, neither of New Zealand’s medical schools takes that stance. In this issue of the Journal, Shelker et al have evaluated the impact of the University of Otago Medical School’s rural entry pathway and rural medical immersion programme (RMIP).²

The rural entry pathway is a government-led policy that ensures a certain quota of entrants into medical school comes from a rural background. The RMIP is a yearlong immersion programme in year 5 of the MBChB programme where some students spend the whole year in rural settings. Shelker et al have shown that these are associated independently and synergistically with subsequent choices to undertake rural training.² This is important to know. The international evidence-based best practice also works in New Zealand. These initiatives are not cheap yet seem to be delivering what was intended.

There are however important notes of caution. The effects have a significant relative effect but the absolute effect is different. While the relative effect is to approximately double the likelihood of undertaking rural training, we know that most people who have chosen a career in rural settings fit none of the criteria – many do not come from rural backgrounds and many did not have the benefit of the RMIP. Thus we are influencing choices, not determining them. This means that while ‘a lot for a few’ is an important aspect of medical training we must not neglect ‘a little for everyone’. As well as the RMIP (for the few), all Otago students have some time in rural contexts – this (for the many) should be valued.

In addition, these findings are associations, not causations. We do not know, for example, if those students choosing to undertake the RMIP might already have decided that rural practice is for them and that the programme itself did nothing to alter that pre-existing view. Nevertheless, even if that were the case, we know that nurturing pre-existing intentions is important.
What we also know about career choices is that many people's views are very fluid until 1–4 years after graduation and that role models and intra-medical school experiences are influential. Interestingly, our recent research has shown that extra-medical school experiences are possibly more influential, at least in choosing a career in general practice: yes, role models are important, but portrayal of various medical disciplines by the media and television shows is also influential as are the views of peers and family. So medical schools can influence these things, but there are many other factors to take into account.

These findings have implications for other types of medical career as well. Given most career choices are made after leaving medical school, we need to consider medical school experience within the three pillars around career choice: selection, medical school/postgraduate experience, and postgraduate incentives.

The medical school experiences need to be positive. However, just as there is the inverse care law – those in most need of some health care services are the least likely to receive it, there could also be an inverse career law – those disciplines of greatest shortage may be the ones that provide the least positive experiences.

Consider a medical discipline that is understaffed and that needs to interest, and be considered by, more medical students. Being understaffed may also mean the few staff that are in place are over-worked and stressed. Such groups may well find it hard to provide the positive role models to medical students that we know are so important. Fortunately, these factors don’t seem to be operating with these rural initiatives. But it does highlight the need to ensure there are synergies between education and service. Furthermore, increasing time in a discipline will not automatically mean more students will become interested in it.

There have been claims that some medical schools should set themselves up to train just one type of doctor. For example a medical school aimed at producing general practitioners. This is a misguided idea. Expecting an 18-year-old, at the time of selection into medical school, to be clear on career choice is naïve, especially if they have not been exposed to the full breadth of medical practice.

Most choices are made after medical school, so the medical school experience is only one factor. But most importantly, the effect of these diverse experiences during medical school is just as important for people not choosing a particular career. In other words, the health service is likely to benefit from tertiary-based super-specialists also having had rural exposure. Such a person is likely to be more understanding of the context and issues affecting rural practice when being referred to from a rural-based doctor.

So are medical careers born or made? Is it nature or nurture? Clearly careers are both, but there is a third element. They are born, made, and attracted. Yes, we need to select the right people, yes we need to provide positive learning experiences, but we also need to make the job attractive enough at the end to close that loop and ensure the initiatives are sustained.

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