Thought the 'bed shortage' was bad, until the 'surgeon shortage' came along

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"Make up your mind how many doctors a community needs to keep it well. Do not register more or less than this number.''

George Bernard Shaw

If you have ever had the opportunity of finding yourself in a surgical theatre, the last thing you want to have on your mind are doubts about the person holding the scalpel. To ensure the highest professional standards are maintained, trainees of the Royal Australasian College of Surgeons (RACS) undergo a rigorous five to six year postgraduate training program prior to final qualification as a surgical consultant. [1] However, such a long and demanding training program has proven to be a double-edged sword for the surgical speciality. Studies have shown that one in four surgeons plan to retire in the next five years and that only sixteen percent of surgeons were under 40 years old. [2] The same study demonstrated that the average retirement age for surgeons has decreased by ten years. [2] These factors place an immense amount of pressure on surgical training programs, particularly in an era where the ageing population is creating more demand for surgical services. [2] While workforce shortage issues are by no means unique to the RACS, and indeed are felt by many medical colleges across Australia, this editorial will focus on the RACS to illustrate the issues affecting a broad range of medical specialities.

Along with many medical colleges around Australia, the RACS faces a looming workforce crisis with an ageing workforce approaching retirement and an ageing population with increasing healthcare needs, combining to create a critical demand for scarce services. The 2011 annual report published by the RACS highlighted that the number of first year surgical trainees across all specialties was 246 [3] compared to the 3000+ medical students graduating from around the country each year. While this represents a relatively small fraction of the available workforce pool, the RACS has taken the initiative to increase the number of surgical trainee positions by twelve percent compared to 2010. [3] Despite these gains, the RACS estimates that at least another 80 surgeons will have to graduate each year in addition to the 184 new surgeons currently graduating each year, in order to begin to redress surgeon workforce shortage. [4,5]

Low trainee numbers represent a composite of many factors, including financial limitations, need for skilled supervision and opportunity for practical experience. [6] The public sector has reached its full capacity for surgical training posts as such posts are funded by the State governments hence they are limited by budget provisions. [5] Consequently, underfunding, chronic shortage of nursing staff and lack of resources in public hospitals are seen as some of the main reasons for extended waiting times for surgery. [7] Due to the lack of such resources, it is a common trend now to see surgical lists being limited or procedures being cancelled because of time constraints. [7] Increasing the number of trainee posts will require significant fundamental changes, namely greater resourcing of the public health system. [6] To avoid the looming workforce crisis, governments will have to move quickly to ensure adequate training posts are in place across all medical specialties. [3,5] In Australia, more than 60% of elective surgery is in the private sector. [5] Novel training opportunities, such as those offered by the private sector, should also be considered as clinicians with the appropriate range and depth of experience required to train junior doctors are not limited to the public sector. [5] Lack of resources, funding, safe working hours and reduced clinical exposure are all elements that add to this crisis of looming workforce shortage. [6,8]

While there is a compelling argument to expand the number of trainee positions around Australia, the challenge is to maintain the highest standards for surgical trainees. [7] Emphasis on the number of training positions created is the priority of any college and is a crucial aspect in offering quality treatment in both the public and private hospitals. [7] However, increasing the number of trainees to accommodate and cope with surgeon shortage might result in reduced individual theatre time, which is not acceptable. [4,7] While this may relieve the workforce shortage, however, it would only create more specialists with limited exposure to a wide range of surgical presentations. [7] The aim of surgical training is to ensure that trainees progress through an integrated program that provides them with the highest professional responsibility under appropriate supervision. [9] This not only ensures exceptional quality but also enables trainees to acquire the competencies needed to perform independently as qualified surgeons. There are concerns nonetheless that if there is a large intake of surgeon trainees it may favour 'quantity' of trained surgeons over 'quality'. [7] This is unacceptable, not only for the safety of our patients, but also in a world of increasing medico-legal implications and litigation. [7]

Another challenge affecting the surgical profession and surgical trainees is the issue of safe working hours. Currently, the reported working hours of the surgical workforce on average is 60 hours per week, excluding 25 hours per week on average spent on-call. [5] Although safe working hours are less of an issue in Australia than the rest of the world, it still affects surgical training. [10] Safety and wellbeing of surgical trainees is a top priority of the RACS. [7] Reduced trainee hours have been encouraged by research showing that doctor fatigue compromises patient care, as well as awareness that fatigue hampers learning. [10] Long hours traditionally worked by surgeons may result in concerns regarding safe working hours and the possibility that the next generation of surgeons will seek enhanced work-life balance. [4,7] Adding to the ominous shortage of surgeons, the challenge still remains whether surgical trainees can still assimilate the necessary clinical experience in this reduced timeframe. [7] More and more trainees place increased emphasis on work-life balance [5], making alternate specialisation pathways a real possibility that many consider.

Many, if not all, of the issues felt by the RACS across Australia are rarefied in rural Australia. Rural general surgery, much like its general practice counterpart, is facing an impending crisis of workforce numbers. [11] Despite increasing urbanisation, approximately 25% of Australians still live in rural Australia [12] and it is this portion of the population that is likely to be the first and worst affected

by any further constriction in medical workforce numbers. Single or two-man surgical practices provide service to many rural and remote centres. [11] However in many areas where surgical services could be supported, no trainee surgeon is available. [11] Many current rural surgeons are also fast approaching retirement age. [11] In past years retention of surgeons in rural communities has been strong. [13] The lifestyle benefits, challenges and rewards all combined, have ensured that a large amount of rural surgeons are growing old in the country. [13] However, this perception may well be a thing of the past. [13] Younger surgeons are more likely to consider time off on call, annual leave and privacy as lifestyle considerations which compel them back towards the metropolitan area. [13] Such a shift in attitude towards limiting one's workload combined with the continuing decline in Australian rural practices will apply various additional pressures on the rural surgeon workforce in the near future. [11]

Two main factors that determine if a trainee surgeon is more likely to pursue a rural career are the exposure to good quality rural terms as an undergraduate and having a rural background. [11,13] Selections for rural posts are more common in doctors from a country background who are more likely to return to, and remain in, a rural practice. [12,13] Acknowledging this factor, many Australian medical schools have now incorporated both mandatory and voluntary rural terms as a part of their curriculum. [11] In addition to these undergraduate initiatives, ongoing rural placements during postgraduate years may need to be established and given greater prominence. [11] A trainee being allocated to the same rural location over a period of years increases the possibility of the trainee settling in the same rural location following their training. [13] This may be due to familiarity with the social and cultural setting as well as the desire to provide continuous care for his/her patients. [13] As a result of these undergraduate and/or postgraduate initiatives, we can expect to witness the next generation of advanced surgical trainees with a foundation of rural experience, demonstrating a willingness to undertake rural terms as an accepted and expected component of their general surgery training. [11,13] These trainees may then choose to settle in the same rural location following training, thus decreasing the rural surgeon shortage.

The aim of surgical training is to ensure that trainees progress through an integrated program that provides them with increasing professional responsibility under appropriate supervision. [8] This enables them to acquire the competencies needed to perform independently as qualified surgeons. [9] The RACS has taken major steps to address its workforce shortage. Continuing efforts to provide for trainees and their needs are given place of prominence in the RACS 2011-2015 strategic plan. The RACS' role in monitoring, coordinating, planning and provisioning of services, as well as obtaining adequate funding for surgical training programs, remains a major responsibility of the College. Emphasis on rural rotations at an undergraduate and early postgraduate level, consideration of the work-life balance of both trainees and surgeons and sufficient staffing of theatres, will help eradicate the surgeon shortage whilst ensuring that the finest surgical education and care is available to Australians into the future.

Conflict of interest

None declared.

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