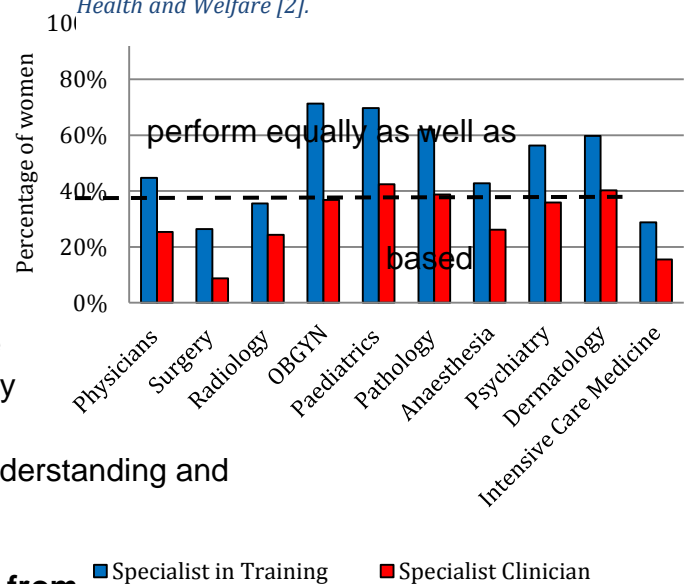


Gender Equity in Medical Specialties

Nicole Seebacher

Today, women make up more than half of medical school graduates, yet they remain under-represented in most speciality areas. With a majority of female medical students for two decades, and medical school and specialty training taking between 9-12 years, it could be expected that parity in specialisation would have been reached by 2008. [6] While women are becoming more evenly represented in specialist-in-training programs, they still remain far behind in many specialties, most notably surgery [2] (Table 1 and Figure 1). Less than 3% of female doctors are surgeons[7]. As of 2015, 10% of surgical fellows are female [7]. Studies have shown that female doctors their male peers on measures of medical knowledge, communication skills, professionalism, technical skills, practiced learning and clinical judgement [3,5]. At present, there is insufficient and incomplete information about the underlying causes of why female doctors are underrepresented in many specialties. A more systematic approach to understanding and addressing these disparities is needed.

Figure 1 Women employed as specialist clinicians and specialist-in-training in 2012. Data obtained from the Australian Institute of Health and Welfare [2].



Reasons why women are opting away from surgery

The enthusiasm of medical students for surgery has been shown to markedly decline upon graduation. Although there is limited data, research suggests that during medical school, interest in surgical careers drops (by half in one study [10]) as prospective candidates are dissuaded by the hours of work and lack of flexibility. Other reasons to not pursue surgery were identified as the surgical lifestyle (66.7%), the surgical work environment (53.3%), and the surgical training requirements (33.3%). Interestingly, only 36.7% was due to a lack of interest in surgery [11]. While the reasons for not pursuing a surgical career were similar for both men and women, those that have been consistently reported to be of particular significance for women, include: **(1)** The perception that surgery is incompatible with a rewarding family life, happy marriage, or the desire to have children [12]; **(2)** Inflexibility of the

training program [13]; and **(3)** Male domination of surgery and the lack of female role models, with associated gender-based discrimination experienced during surgical rotations [14-17].

- **The surgical lifestyle.** Surgical training is rigorous and the lifestyle that accompanies a busy surgical practice is taxing, particularly for families. Surgical trainees have little control over on call rosters and are required to regularly move locations, making childcare and schooling complicated. In addition to this, trainees have ongoing educational commitments, creating difficulties for parents wishing to study in addition to working an average 60 hour week.

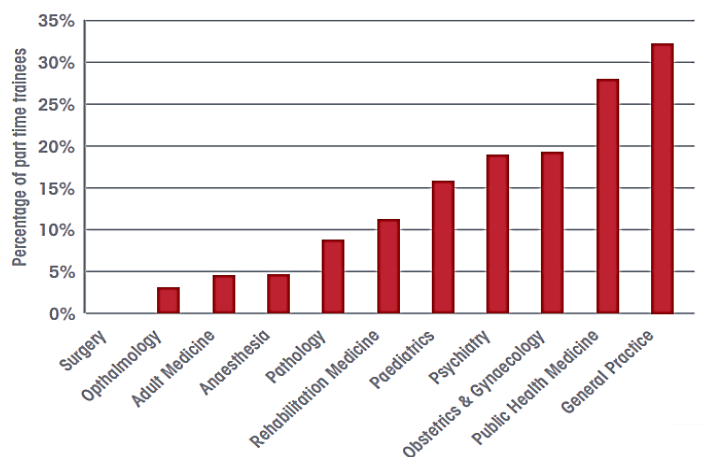


Figure 2 Australian part-time advanced trainees in 2009 by Specialty. Figure from Tomlinson 2013 [1]

- **The flexibility of surgical training.** A 2011 survey by the Royal Australasian College of Surgeons Trainee Association (RACSTA), reported that only 0.3% of surgical trainees were currently training part-time, but that 33.8% had expressed an interest in undertaking less than full-time training. In the 2012 Women in Surgery committee's white paper "*Flexible surgical training in Australia: it's time for change*", it was reported that flexible and/or part-time training had no decline in quality of trainees in the specialities that offer flexible training [21, 22].
- **Role models.** A lack of role models (e.g. those with formal leadership roles, e.g. senior surgeons, departmental heads, or professors) is another key factor discouraging women from selecting a career in surgery [16, 26, 27]. Specialty medical programs with higher proportions of females in faculty achieve higher numbers of female trainees [28]. Some studies have suggest that the gender of role models changes stereotypes, increases identification with the role, and increases the perception of one's own abilities [29].
- **Gender based discrimination.** In a study of 334 members of the Association of Women Surgeons, 87% experienced gender-based discrimination in medical school, 88% in residency, and 91% in practice [15]. The study



identified that the perceived sources of gender-based discrimination were their superiors, physician peers, clinical support staff, and patients. Notably, of these discriminatory events, 40% emanated from women and 60% from men [15].

An Expert Advisory Group formed by RACS has outlined extensive and systemic gender-based discrimination towards female surgeons. The report showed lower salaries, fewer opportunities for career advancement, different referral patterns from other doctors, less personal support or mentoring, a lack of senior female surgeons as role models, less respect or a different level of responsiveness from the medical team, bias against pregnancy and family responsibilities, and an 'old boys club' culture [31]. Compared with men, women were more likely to be deterred by their perceptions of the surgical personality and the view of surgery as an 'old boys' club' [17].

Progress on Gender Equity

- **Colleges** RACS has introduced a policy supporting flexible surgical training. However, they admit that the current surgical clinical training environment is not conducive to establishing posts that are less than full-time [34]. RACS recently established the 'Flexible Training Working Party' to look at how to make part-time training a possibility for surgical trainees. Members include jurisdictional representatives (ie, hospital and health department), and representatives from Colleges with a higher uptake of part-time training than the RACS. It is important to note that while the College can accredit trainee posts, it does not create posts or employ trainees.
- **Medical Associations** The Australian Medical Association (AMA) is working alongside specialist Colleges to encourage flexible training arrangements and job-sharing. The AMA released a discussion paper regarding Flexible Surgical Training, "Flexibility in Medical Work and Training Practices", which offers ways of implementing flexible work and training arrangements.
- **Hospitals** After lobbying the state government, the Royal Adelaide Hospital has successfully implemented a part-time surgical training model [4]. All trainees that completed the 12 month, accredited, government funded, stand-alone, 0.5 full-time equivalent position, have subsequently passed their RACS Fellowship examination in General Surgery. [4, 35]



What still needs to change?

Resolving the discrepancy between the number of female medical students and the number of specialist female clinicians remains a complex problem. Priority issues include:

- **Mentoring and role-modelling:** Medical schools and Hospitals play an important role as the facilitators of the first formal contact of medical students with the surgical profession during hospital-based surgical rotations. This represents a time where gendered perceptions of surgery may be contradicted or reinforced. Therefore, Medical schools need to expose students to a diverse range of surgical role models, as clinical tutors, lecturers or student mentors.
- **Flexible training:** The extent of the demand for flexible training and its benefits needs to be systematically assessed [36]. A range of potential models could be adapted for medical training purposes, including: full-time flexible (start late, finish late), part-time flexible, and a job-share [37]. Research is needed determine the impact on educational outcomes, the minimum level of training required to maintain skills, and how competencies may be affected by intermittent breaks in training. This can be assisted through the Colleges and governments increasing the transparency of their information regarding previously successful programs.
- **Ending discrimination and harassment:** Hospitals and Colleges should set clear and consistent standards, and enforce accountability for professional behaviour.

Priorities for Level Medicine

- Supporting the development of formal and evidence-based retention strategies, including mentoring support programs and flexible training pathways.
- Supporting data collection and research into barriers to females in specialty training programs and collection of
- Creating forums for discussion and building advocacy capacity in medical students and junior doctors.



Table 1 Breakdown of Australian medical practitioners by specialty and gender in 2015. Data obtained from Walton 2015 [7].

SURGICAL SPECIALTY	TOTAL NUMBER	% FEMALE
Cardiothoracic	160	5.6
General	1423	11.6
Neurosurgery	201	10.9
Orthopaedic	1116	3
Otolaryngology	398	9
Paediatric	85	20
Plastic & Reconstructive	356	12.1
Urology	332	6.9
Vascular	165	7.3

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