Surgical Workforce
2018 Census Report

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Royal Australasian College of Surgeons
2018 Surgical Workforce Census Summary Report

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ABBREVIATIONS

~	Not Applicable
%	Percentage of respondents
AMA	Australian Medical Association
ACT	Australian Capital Territory
AUS	Australia
CAR	Cardiothoracic surgery
CPD	Continuing Professional Development
F	Female
GEN	General surgery
IQR	Interquartile range
M	Male
N	Number of Fellows that responded to the Census question
NEU	Neurosurgery
NSW	New South Wales
NT	Northern Territory
NZ	New Zealand
ORT	Orthopaedic surgery
OTO	Otolaryngology - Head and Neck surgery
PAE	Paediatric surgery
PLA	Plastic and Reconstructive surgery
QLD	Queensland
RACS	Royal Australasian College of Surgeons
SA	South Australia
SET	Surgical Education and Training Program
TAS	Tasmania
URO	Urology
VAS	Vascular surgery
VIC	Victoria
WA	Western Australia

INTRODUCTION

The Royal Australasian College of Surgeons (RACS), formed in 1927, is a non-profit organisation that is responsible for training surgeons and maintaining surgical standards across Australia and New Zealand. RACS' purpose is to be the unifying force for surgery in Australia and New Zealand, with FRACS standing for excellence in surgical care.

The Surgical Workforce Census commenced in 2005 and is now conducted every two years. The Census is an important tool to assist RACS in its workforce planning and advocacy. It also provides additional information regarding numerous factors that affect surgeons in their day to day work. This allows RACS to build a picture of the challenges facing the surgical workforce and to help identify those areas in which RACS needs to advocate and find solutions.

This is the sixth Surgical Workforce Census conducted by RACS. Reports on our previous Censuses can be found on our website (www.surgeons.org).

KEY FINDINGS

Work Patterns

- Fellows worked an average of 50 hours per week in 2018 compared to 51 hours in 2016 and 53 hours in 2014.
- Fellows who work full time reported a preference to work fewer hours than their current average of 50 hours per week. Fellows who work part time worked similar hours to their preferred average weekly hours per week, whereas locums reported a preference to work an average of 7.5 hours more per week.
- Fellows in the private sector reported working longer hours in consulting work than public counterparts.
- In the public sector, one in six Fellows worked more than the recommended emergency on-call period of 1:4.
- Australian Fellows in private practice reported that the Australian Medical Association (AMA) schedule is about right, when considering what is a fair professional fee.
- Almost one in five Fellows were involved in other paid employment e.g. medico-legal work and research.

Rural Planning

- Approximately 30% of Australian and 40% of New Zealand Fellows reported working in a rural or regional location of Australia or New Zealand; this includes those practicing in both metropolitan and rural or regional areas.
- For the subset of Fellows reporting that they only worked in rural or regional locations, almost 75% were working on a full time basis in those rural or regional locations
- Almost two thirds of Fellows indicated no intention to change their current work hours in rural or regional areas. One in five Australian and New Zealand Fellows who work in rural or regional locations only plan to decrease their work hours.

Volunteer and Pro-bono Work

- More than one in three Fellows participate in volunteer/ pro-bono work.
- Non-clinical work and clinical education were the most nominated pro bono activity.
- One in five Fellows were involved in RACS activities such as educational instructor, surgical mortality audit assessor and examiner.
- Fellows reported working on average 18 hours per month on pro bono activities.

Surgical Education and Training (SET) Program

- Almost three quarters of the surveyed Fellows were involved in SET training.
- Fellows involved in SET spent on average of just under 10 hours a week in the public sector on supervision and related administrative education work related to SET.

Work-life Balance and Health

- Administrative processes and administrative regulation remain a source of high stress to one in five Fellows
- 9% of Fellows reported seeking professional assistance for stress or mental health issues in the last two years.
- Two in three Fellows monitored their health in the last two years, visiting a medical doctor for a health check-up or at regular intervals as dictated by existing medical conditions
- One quarter of female respondents reported returning to work within six weeks of taking parental leave.

Future Work Intentions

- Fellows under 40 years of age intend to maintain their preferred weekly work hours over the next 10 years.
- Fellows aged 50 years and over report intent to decrease work hours over the next 10 years.
- Almost 75% of Fellows aged 65 years or older intend to continue in paid employment, with the primary reason being that they are doing work that they enjoy.

METHOD

Surgeon Eligibility Criteria

All surgeons who are Fellows of RACS and whose usual workplace was in Australia and New Zealand were eligible to participate in the 2018 Surgical Workforce Census via an online survey. RACS Fellows are surgeons who have passed the Fellowship Examination in one of the following specialties: Cardiothoracic surgery (CAR), General surgery (GEN), Neurosurgery (NEU), Orthopaedic surgery (ORT), Otolaryngology (OTO), Paediatric surgery (PAE), Plastic surgery (PLA), Urology (URO) or Vascular surgery (VAS). Surgeons that trained in the specialties of Ophthalmology or Obstetrics and gynaecology and RACS Fellows working outside Australia or New Zealand were not eligible to participate in the Census.

A Fellow may be defined as 'active', 'semi-retired' or 'retired' (i.e., no longer registered to practise medicine). At the time of the Census commencement, there were 6761 Fellows in Australia and New Zealand. Of those, 223 opted out of communication or did not have an email address registered with RACS. Hence the final survey was issued to 6538 Fellows, 5658 of which worked in Australia and 880 in New Zealand. An additional Fellow from overseas, who resided in Australia during part of 2018, requested to participate in the Census.

Table 1.1: 2018 Surgical Workforce Census target population

	AUS	NZ	Total
All active and retired Fellows	5853	908	6761
No email/ no communication request	195	28	223
Additional O/S Fellow who worked in AUS or NZ	1	0	0
Total no. of Census invitations	5659	880	6539

Census Questionnaire

The Census consists of a set of core questions that were considered relevant to the Fellows' day-to-day work, future work intentions and work-life balance. More specifically, Fellows were asked to reflect upon their workforce status, weekly hours of work at present and as intended in the future, frequency of emergency on-call work, private billing practices, retirement intentions, leave taken, stress levels, health monitoring, and roles in volunteering and Surgical Education and Training (SET) Program involvement.

Data Analysis

When a question elicited a "not applicable" answer, the response was excluded from the total. Respondents that did not answer a question were excluded from analysis of that question. At the time of survey, a small proportion of valid responses (1.3%) were from Fellows reporting that they currently live outside of Australia or New Zealand; these were also excluded from further analysis.

Table 1.2: Summary of respondents excluded from analysis

Total no. of respondents	1961	
No. of respondents overseas (excluded)	25	1.3%
No. partial respondents (excluded)	49	2.6%
No. duplicate respondents (excluded)	4	0.2%
Final no. of valid respondents	1883	

Data were analysed (where applicable) by segments including sex (male/female), age (≤39, 40-49, 50-59, 60-69, 70-79, ≥80), location (8 Australian states/territories and/or New Zealand), country (Australia, New Zealand), specialty (CAR, GEN, NEU, ORT, OTO, PAE, PLA, URO, VAS) and workforce status (full-time, part-time, locum). Unless otherwise stated, descriptive statistics presented in this report are based on results of the respondent population, imputation or weighting methods have not been applied.

Chapter 1 – Descriptive Statistics

RACS achieved a 28.8% response rate (N=1883) for the 2018 Surgical Workforce Census, compared to 39.5% in 2016.[1] The country-specific response rate was 27.3% of Australian Fellows and 38.5% of New Zealand Fellows.

Out of 1883 respondents, 1690 were in active practice, while 193 reported to be retired.

To establish representativeness of the results, the active respondents were compared with active Fellows from the Activities Report.[2] The respondents represent a consistent demographic profile to that of the RACS active Fellowship population, with similar age group, sex and specialty profiles (Figure 1.1 to Figure 1.4). In addition, all Australian states and territories and New Zealand were evenly represented in the final data set when compared to the Fellowship.

Figure 1.1: Sex profile of Active Census respondents and Active RACS Fellows, 2018

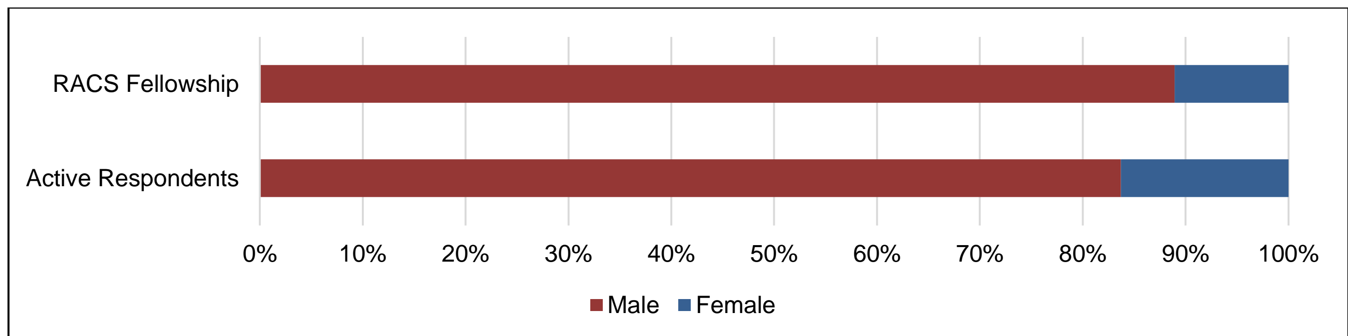


Figure 1.2: Age profile of Active Census respondents and Active RACS Fellows, 2018

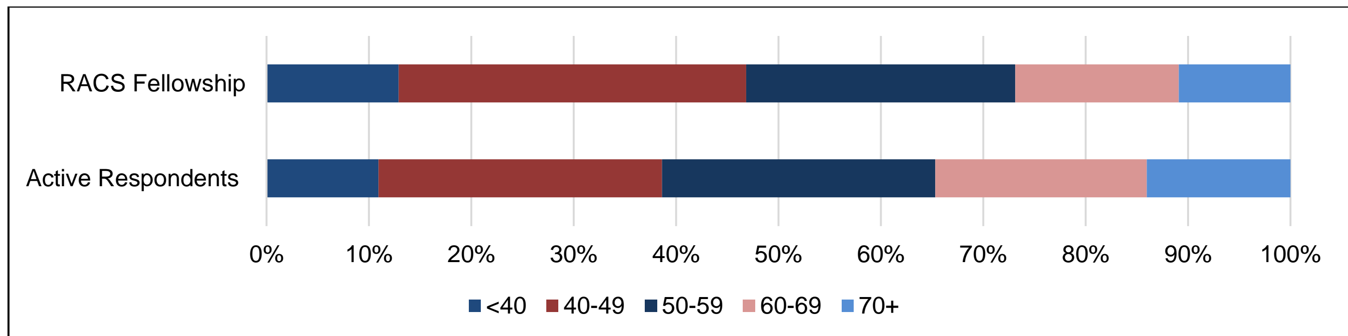
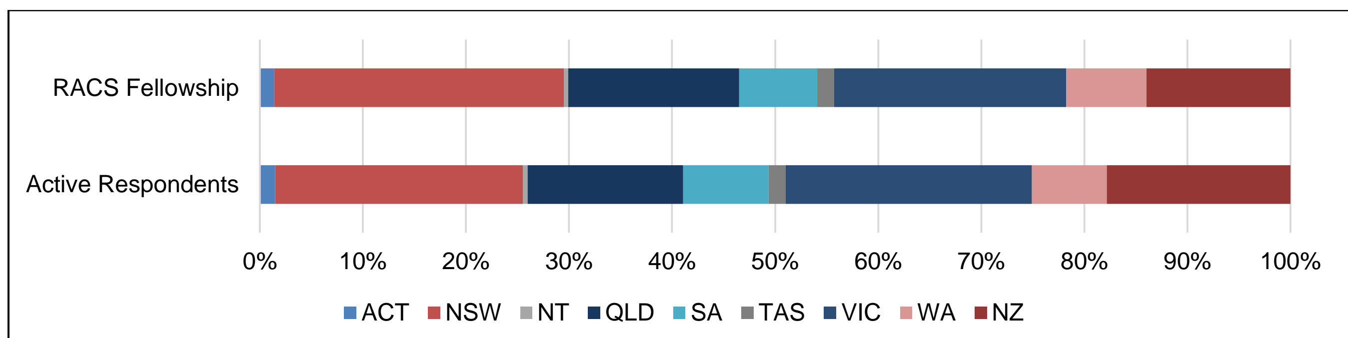
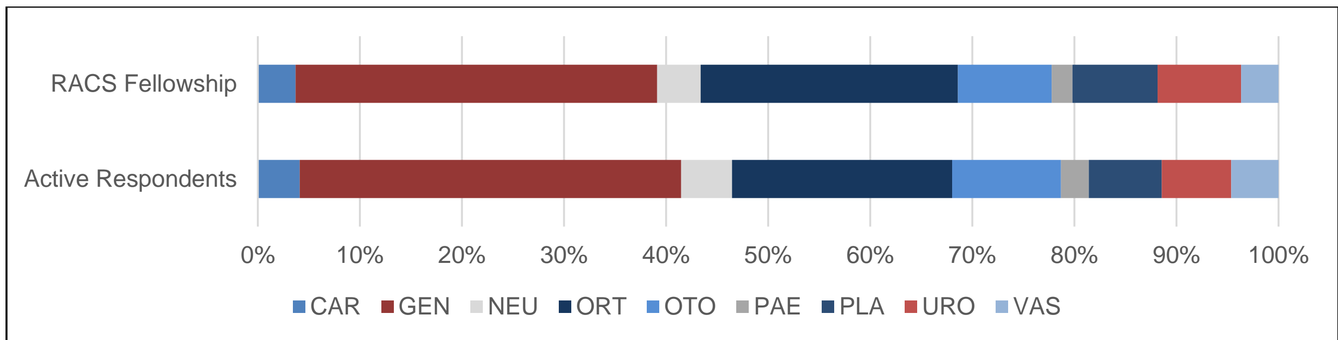


Figure 1.3: Location profile of Active Census respondents and Active RACS Fellows, 2018



Note: Refer to Table A1.1 to A1.3 in Appendix A for the tabulated data

Figure 1.4: Specialty profile of Active Census respondents and Active RACS Fellows, 2018

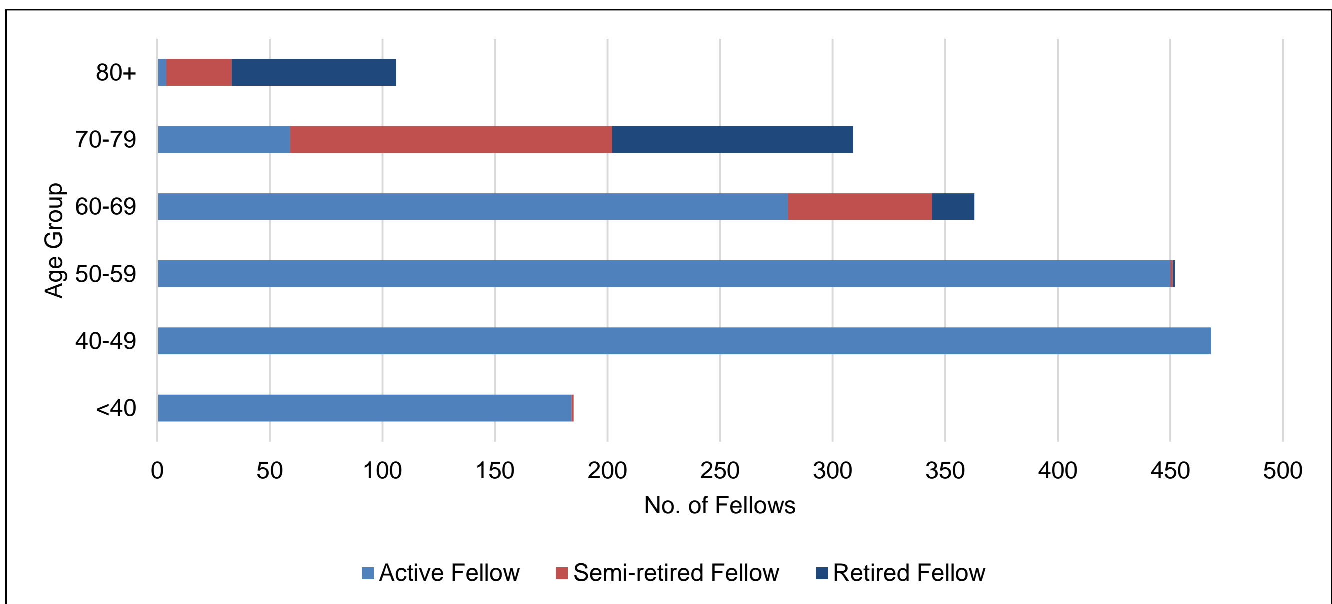


Note: Refer to Table A1.4 Appendix A for the tabulated data

In terms of Fellowship status, 77% of respondents identified as an active Fellow, 13% as a semi-retired Fellow and 10% a retired Fellow (Figure 1.5).

The mean age of respondents was 57 years compared to 53 years in 2016[1] and 56 years in 2014.[3] With the mean age of 46 years, female Fellows were 11 years younger on average than their male counterparts.

Figure 1.5: Age distribution and Fellowship status of Census respondents, 2018



Note: Please refer to Table A1.5 and A1.6 in Appendix A for the tabulated data

Chapter 2 – Work Patterns

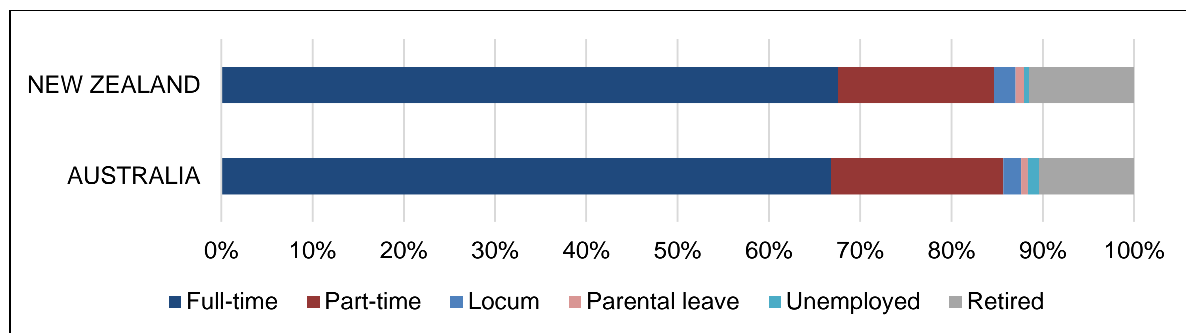
Summary

- Fellows employed full time worked an average of 50 hours per week compared to 51 hours in 2016 and 53 hours in 2014.
- Fellows who work full time reported a preference to work four hours less than their current average of 50 hours per week. Fellows who work part time reported similar averages when comparing weekly hours worked and preferred hours (19.6 and 20.4 respectively).
- Locums preferred to work on average 7.4 more hours than they are currently working.
- Fellows in the private sector reported working longer hours in consulting work than their public sector counterparts. Time spent on procedural work and administration was similar in private and public sectors.
- In the public sector, one in six Fellows worked more than the recommended emergency on-call period of 1:4.
- Australian Fellows in private practice reported that the AMA schedule is about right, when considering what is a fair professional fee.
- Almost one in five Fellows were involved in other forms of paid employment such as medico-legal work and research. Older Fellows were more likely to be involved in other forms of employment.

Employment Status

Almost 77% of active Fellows reported that they were working full time (Figure 2.1). Most Younger Fellow respondents (defined as within their first ten years of Fellowship) are engaged in full time work, and only three respondents aged less than 59 years reported that they were unemployed at the time of Census data collection.

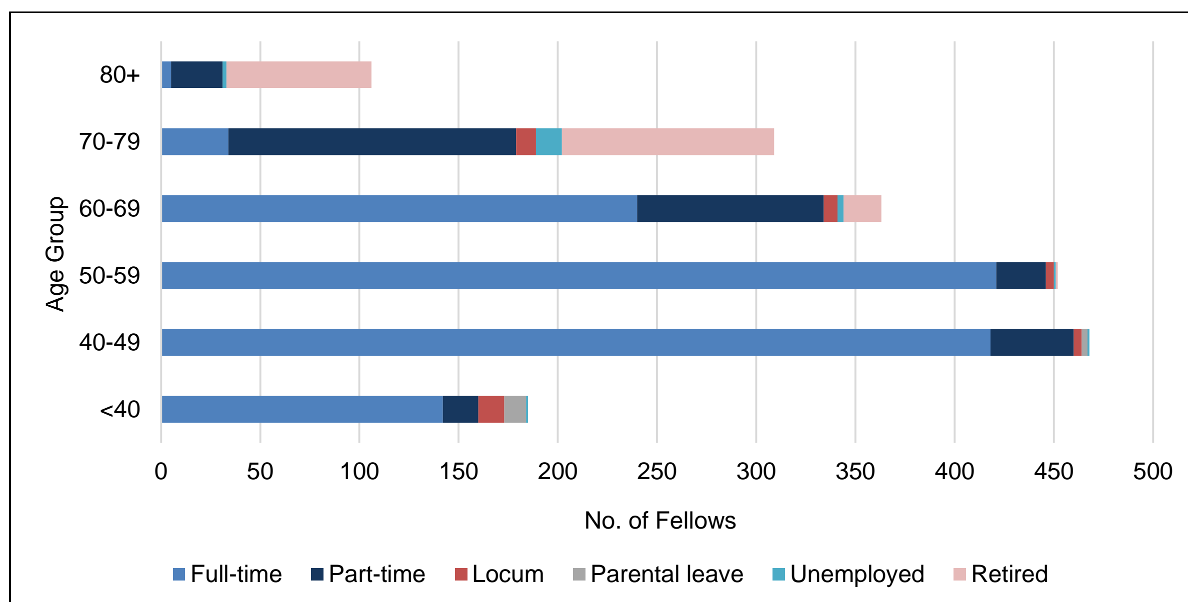
Figure 2.1: Employment status of Fellows by country



Note: Refer to Table A2.1 in Appendix A for the tabulated data

Twenty-one percent of Fellows reported that they were working in a part-time capacity. The majority of Fellows who reported part time employment were aged 60 years or older, and this is likely to be a reflection of their transition into retirement. Locum work was undertaken by a very small proportion of Fellows (2.3% of respondents) and just under half of this cohort comprised of Younger Fellows under the age of 40 years. This may be due in part to insufficient work in earlier years of Younger Fellows' employment.

Figure 2.2: Employment status of Fellows by age group



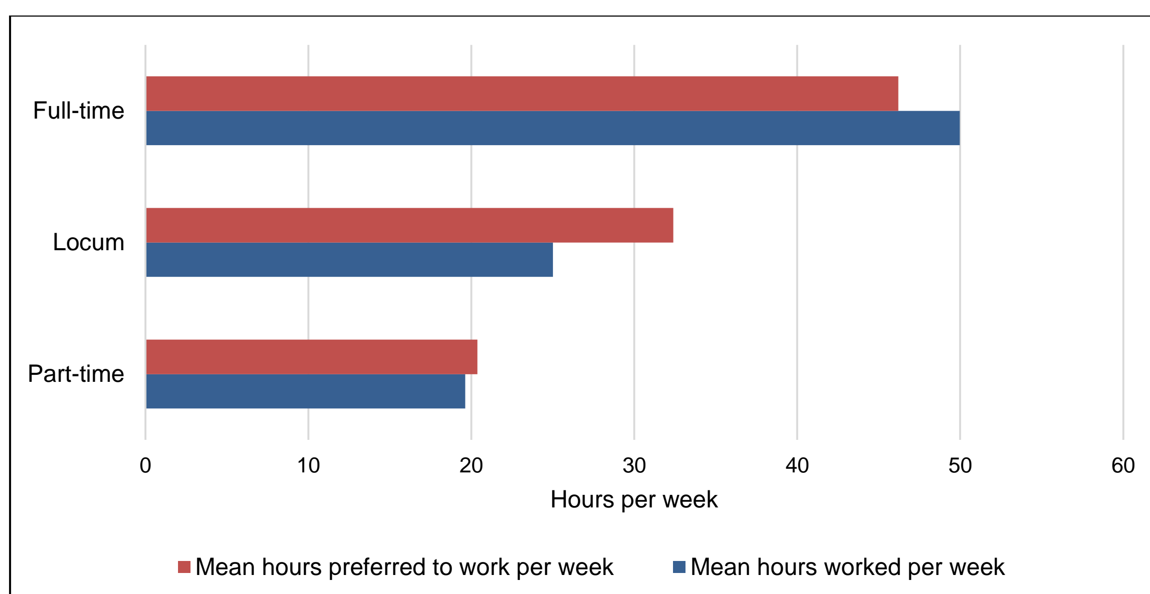
Note: Refer to Table A2.2 in Appendix A for the tabulated data

Work Hours

Fellows employed full time reported working an average of 50 hours per week, although they preferred to work almost four hours less a week (Figure 2.3).

The reported hours of full time work was slightly less than the previous Census reports of 51 hours per week in 2016 and 53 hours per week in 2014. Part-time Fellows worked on average 19.6 hours per week compared to 21.5 hours per week in 2016 and locums reported working 25 hours per week, less hours than previously reported (35.8 hours per week in 2016). Part-time Fellows reported a preference of similar hours to those currently worked (approximately 20 hours) and locums reported a preference to work an average of 7.5 hours more per week.

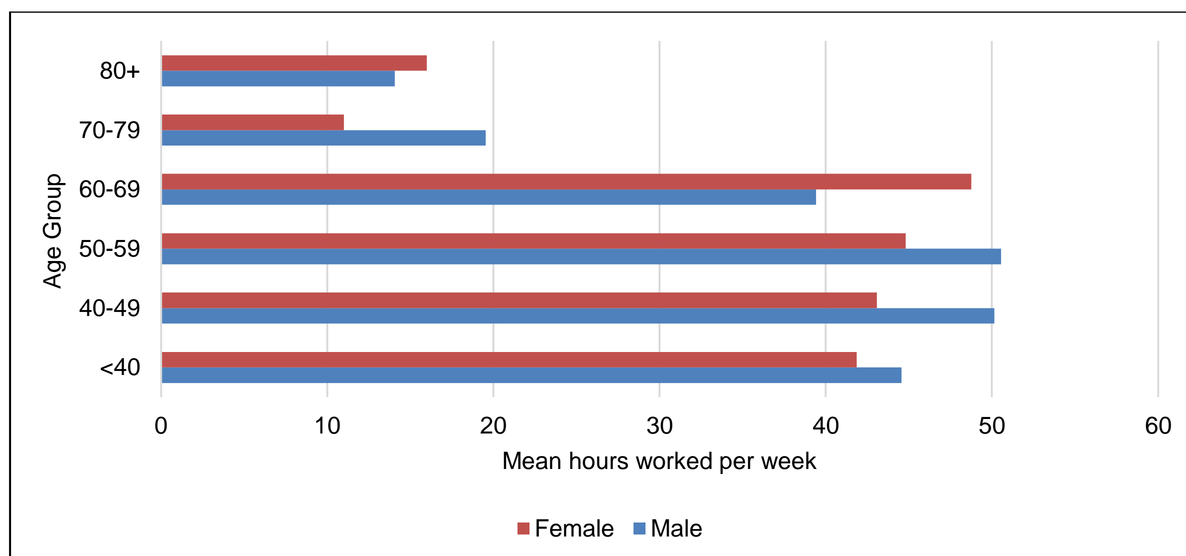
Figure 2.3: Mean hours worked per week worked and preferred weekly work hours by workforce status



Note: Refer to Table A2.3 in Appendix A for the tabulated data

Until the age of 60 years, the average male Fellow reported working on average 48.4 hours a week, while female Fellows worked on average 43.3 hours a week. Male Fellows aged 50-59 years worked the longest average hours of 50.5 hours a week, while female Fellows working the longest hours were aged 60-69, working an average of 48.8 hours a week (Figure 2.4). Fellows aged 70-80+ years (male and female) had the lowest average hours worked per week (16.8 hours), with many reducing their hours as they move into semi-retirement.

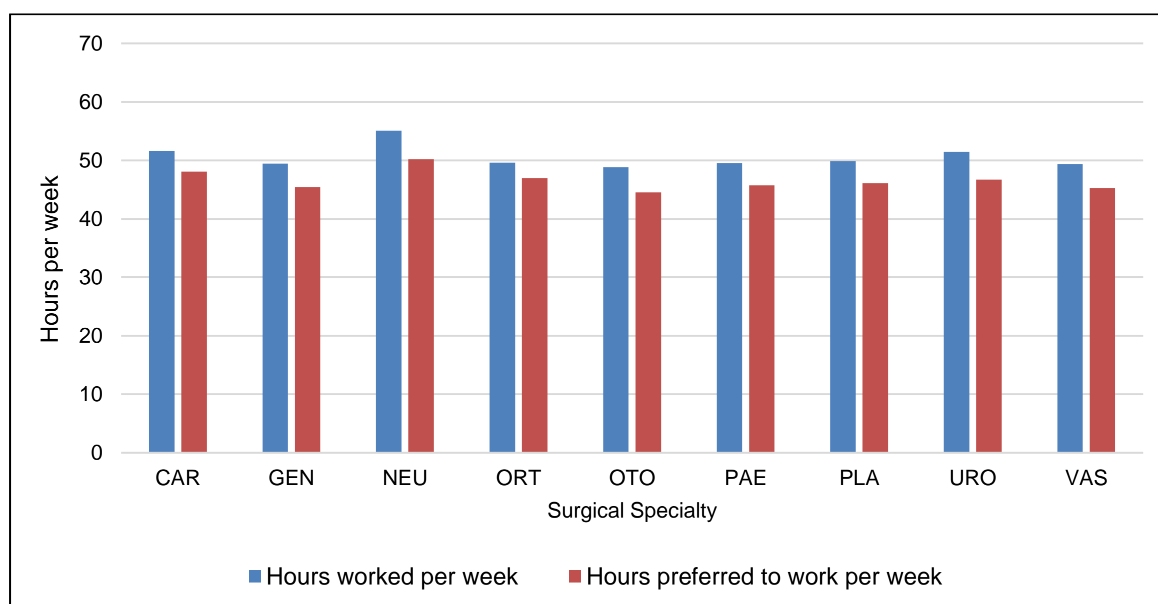
Figure 2.4: Mean hours worked per week by age group



Note: Refer to Table A2.4 in Appendix A for the tabulated data

Full time Neurosurgeons reported the longest work week (55.1 hours) whereas Otolaryngologists reported the shortest work week (48.8 hours) (Figure 2.5). The smallest difference between hours worked and preferred weekly work hours was for Orthopaedic surgeons (preferring 2.6 hours less per week) followed by Paediatric surgeons, Cardiothoracic surgeons and Plastic and Reconstructive surgeons (preferring around 3.8 hours less per week). The biggest difference was Neurosurgeons, preferring to work on average 4.9 hours less per week.

Figure 2.5: Mean hours worked per week and preferred weekly work hours of full-time Fellows by specialty



Note: Refer to Table A2.5 in Appendix A for the tabulated data

Public and Private Sector Employment

Sixty percent of respondents reported working in public and private practice. Paediatric surgery had the highest percentage of respondents who only worked in public practice (30.2%). Conversely, Plastic and Reconstructive surgery had the highest percentage of respondents who only worked in private practice (31.9%). The highest percentage of reported mixed practice was Otolaryngology – Head and Neck Surgery (73.9%) (Figure 2.6).

Figure 2.6: Percentage of Fellows working in public or private practice by surgical specialty

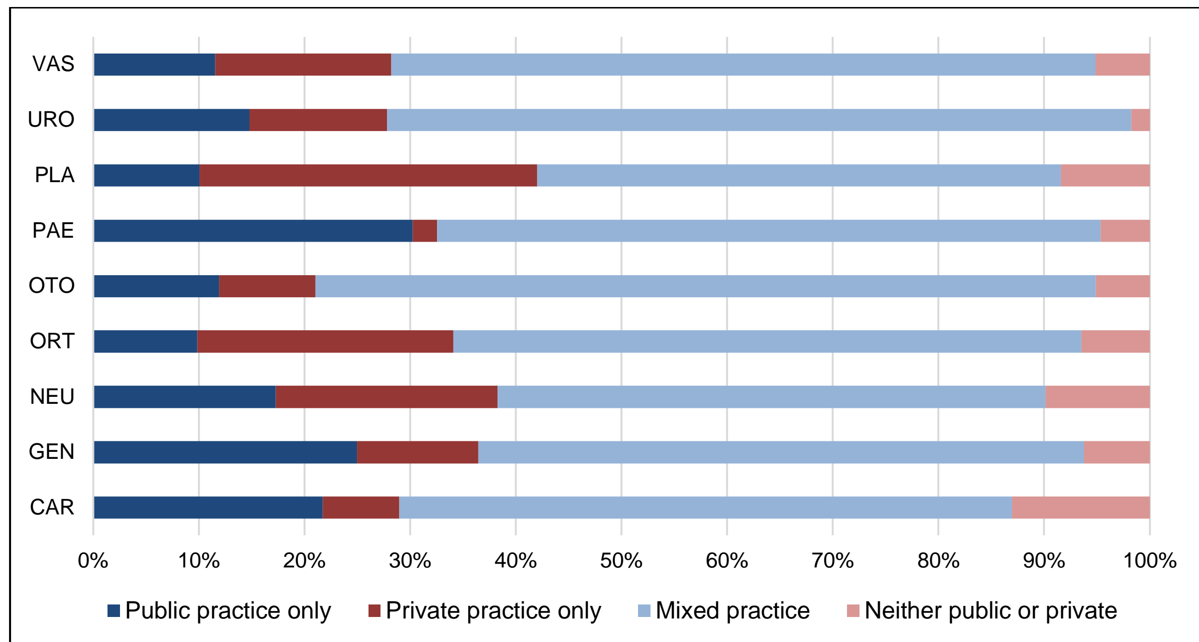
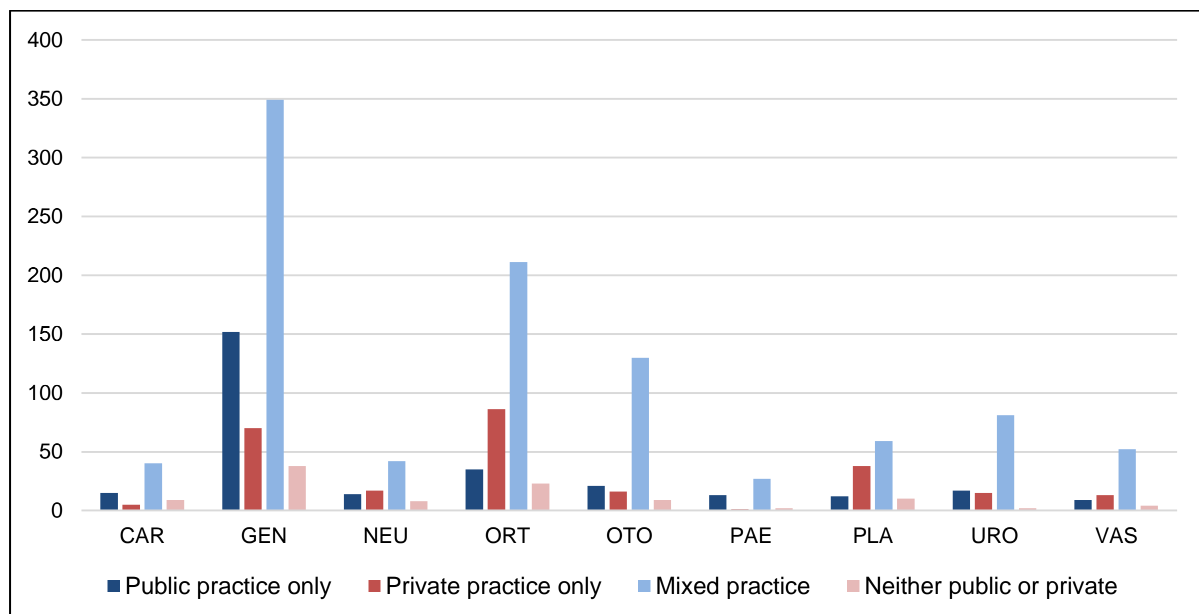


Figure 2.7: Number of Fellows working in public or private practice by surgical specialty



Note: Please refer to Table A2.6 and A2.7 in Appendix A for the tabulated data

Fellows were asked to report on their average number of hours worked per week for consulting, procedural and administrative work (Table 2.1 & 2.2). Fellows in the private sector reported working on average longer hours per week in consulting work than their public sector counterparts.

Fellows were asked to report on their average hours per week spent engaging in consulting, procedural work and administration activities in public and private settings. Fellows in the public sector reported spending more time on administrative work, reporting two hours on average per week, compared to one hour per week in private practice. With the exception of Cardiothoracic surgery, the median hours spent on consulting work were higher in in the private sector than the public sector. For some specialties like Orthopaedic surgery, Otolaryngology and Urology, the median hours spent on consulting in the private sector was more double the time spent on consulting in the public sector.

Table 2.1: Median hours per week with interquartile range (IQR) Fellows spent on consulting, procedural work and administrative work in the public sector by surgical specialty

	Consulting (IQR)	Procedural work (IQR)	Administration (IQR)
CAR	5 (4 - 10)	20 (11 - 28)	5 (2 - 7)
GEN	6 (4 - 10)	10 (6 - 16)	3 (1 - 7)
NEU	6.5 (4 - 10.5)	10 (8 - 15)	4.5 (1 - 10)
ORT	6 (4 - 10)	8 (4 - 11)	2 (1 - 4.75)
OTO	6 (3 - 10)	6 (4 - 10)	2 (0 - 4)
PAE	10 (8 - 15)	10 (8 - 14)	8 (3.75 - 10.75)
PLA	8 (4 - 10)	8 (4 - 16)	2 (1 - 5.5)
URO	5 (2 - 10)	8 (4 - 12)	2 (1 - 4)
VAS	7 (5 - 11)	12 (6 - 15)	4 (1 - 8)
TOTAL	6 (4 - 10)	10 (5 - 15)	2 (1 - 6)

Compared to 2016 and 2014, the median hours spent on public practice consulting and procedural work remains stable. The median time spent on administration in the public sector (two hours per week) remains the same as 2016 and a decrease from three hours reported in 2014.

Table 2.2: Median hours per week with interquartile range (IQR) Fellows spent on consulting, procedural work and administration in the private sector by surgical specialty

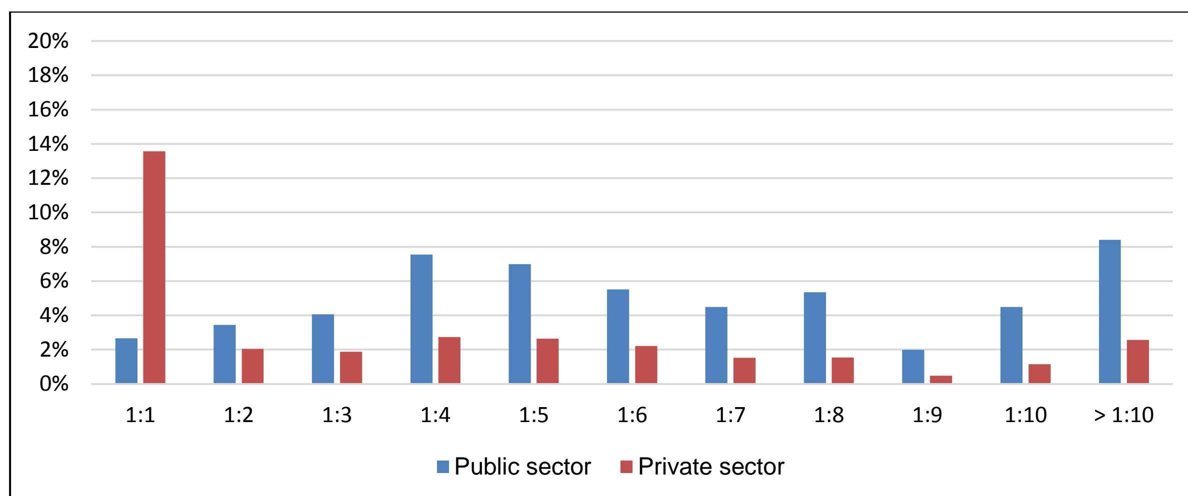
	Consulting (IQR)	Procedural work (IQR)	Administration (IQR)
CAR	5 (2 - 7)	10 (5 - 16)	1 (0 - 2)
GEN	10 (5 - 15)	10 (4 - 14)	1 (0 - 2)
NEU	14 (10 - 24)	10 (6.5 - 13)	1 (0 - 3)
ORT	16 (10 - 22)	12 (8 - 16.25)	1 (0 - 4)
OTO	18 (12 - 25)	8 (4 - 12)	1 (0 - 2)
PAE	5 (4 - 11)	5 (2 - 7.5)	0 (0 - 1)
PLA	13 (8 - 20)	15 (9 - 20)	2 (0 - 4)
URO	17 (10 - 24)	10 (6 - 15)	2 (0 - 3)
VAS	10 (6 - 20)	10 (4 - 14)	1 (0 - 3)
TOTAL	12 (8 - 20)	10 (5 - 15)	1 (0 - 3)

Compared to 2016 and 2014, the median hours spent on private practice consulting and procedural work and administrative work also remained stable.

Fewer Fellows in the private sector took emergency on-call work compared to the public sector. 63.1% of Fellows in the private sector reported they do not undertake emergency on call work, compared to 17.5% of Fellows working in the public sector. Of those doing on-call work in the public sector during 2018, approximately one in six Fellows took emergency on-call more frequently than the recommended 1:4 [4] (Figure 2.8). This is the same result reported for the 2016 Census.

Approximately one in seven respondents who took emergency on-call work in the private sector did so at 1:1 frequency. However, this is likely to reflect the permanent 'on-call' state Fellows maintain for their patients in private hospitals.

Figure 2.8: Frequency of emergency on-call Fellows took by work sector



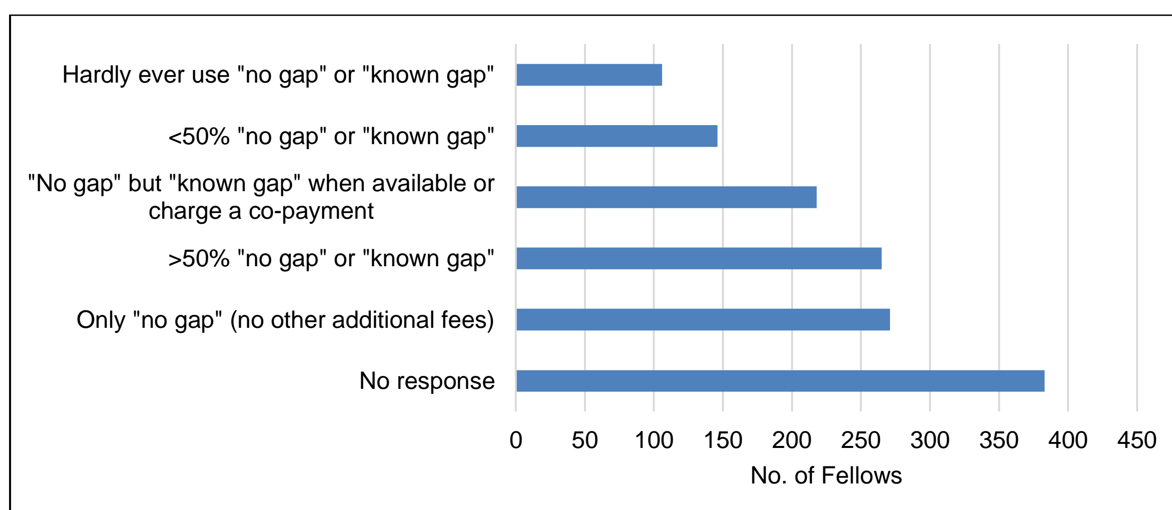
Note: Refer to Table A2.8 in Appendix A for the tabulated data

Private Billing Practices

The 2018 Surgical Workforce Census included two new questions related to private billing practices.

Fellows who work in the private sector were asked to describe how their procedural billing is obtained, considering their total private procedural income. Responses were spread across the range of options, with 19.5% of Fellows selecting only "no gap" (no other additional fees), followed by 19.1% selecting >50% "no gap" or "known gap" and 15.7% selecting "no gap" but "known gap" when available or charge a co-payment.

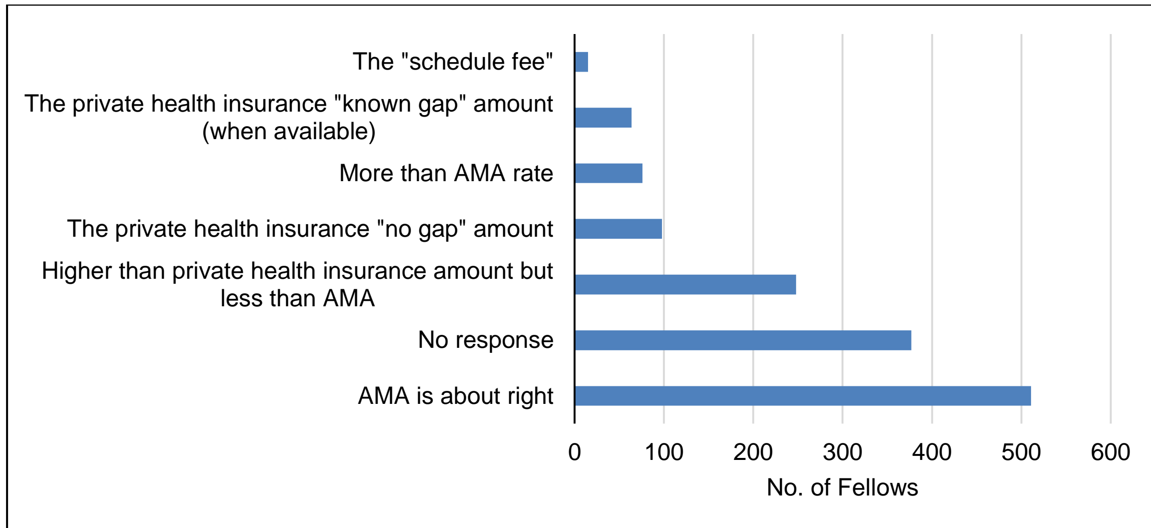
Figure 2.9: How private billing income is obtained, considering total private procedural income



Note: Refer to Table A2.9 in Appendix A for the tabulated data

Fellows were also asked what they consider to be a fair professional fee, ignoring their current billing practice. Almost 40% of respondents reported that the Australian Medical Associating (AMA) fee is about right as a fair professional fee (N=511). The second most frequently selected option was higher than the private health insurance amount but less that the AMA (18%).

Figure 2.10: Consideration of a fair professional fee, ignoring current private billing practices



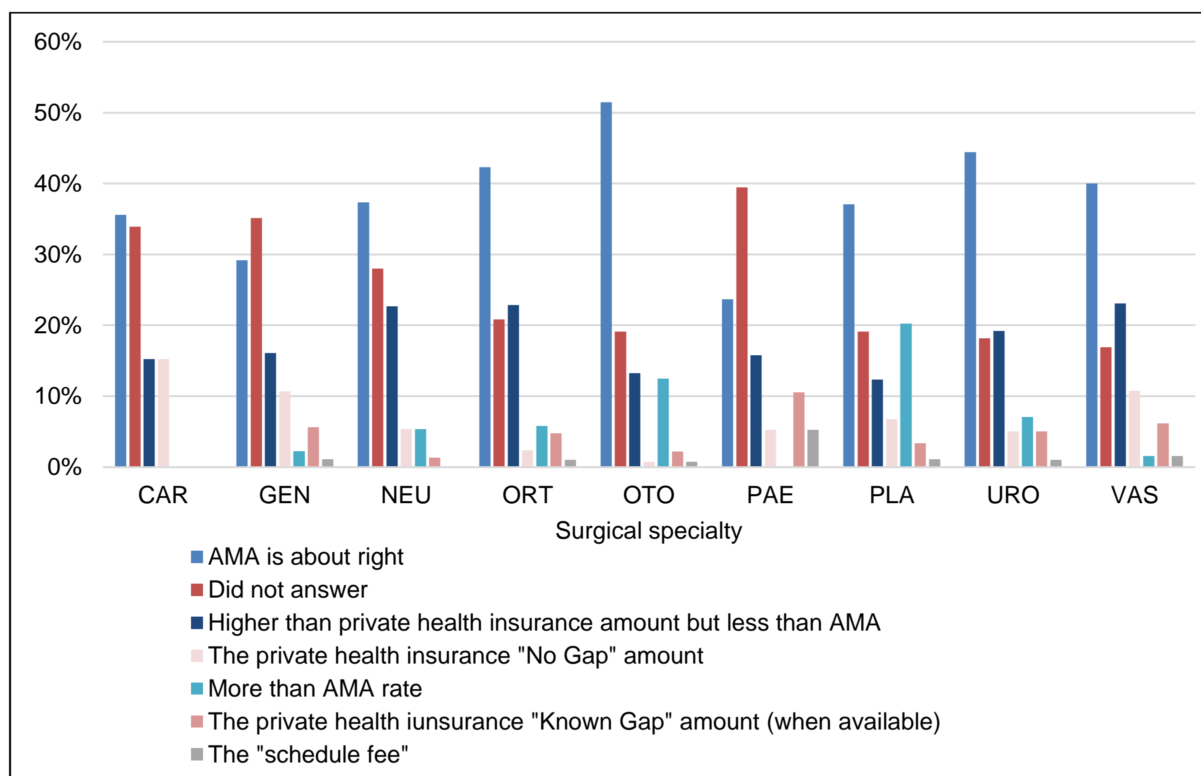
Note: Refer to Table A2.10 in Appendix A for the tabulated data

Of the 511 Fellows who reported that they consider the AMA to be about right in terms of a fair professional fee, the most frequently selected option for obtaining private billing income were >50% no gap" or "known gap" (N=158) and "no gap" but "known gap" when available or charge a co-payment (N=105). For a crosstabulation of the results for how private billing is obtained and what Fellows considered to be a fair professional fee, refer to Table 2.10a in Appendix A.

The results for consideration of fair professional fee were reviewed by each surgical specialty.

Just over 51% of Otolaryngologists reported the AMA is about right, compared to 24% of Paediatric surgeons. The lack of support for the “schedule fee” as a fair professional fee was consistent across the surgical specialties (Figure 2.11).

Figure 2.11: Consideration of a fair professional fee, ignoring current private billing practices by surgical specialty

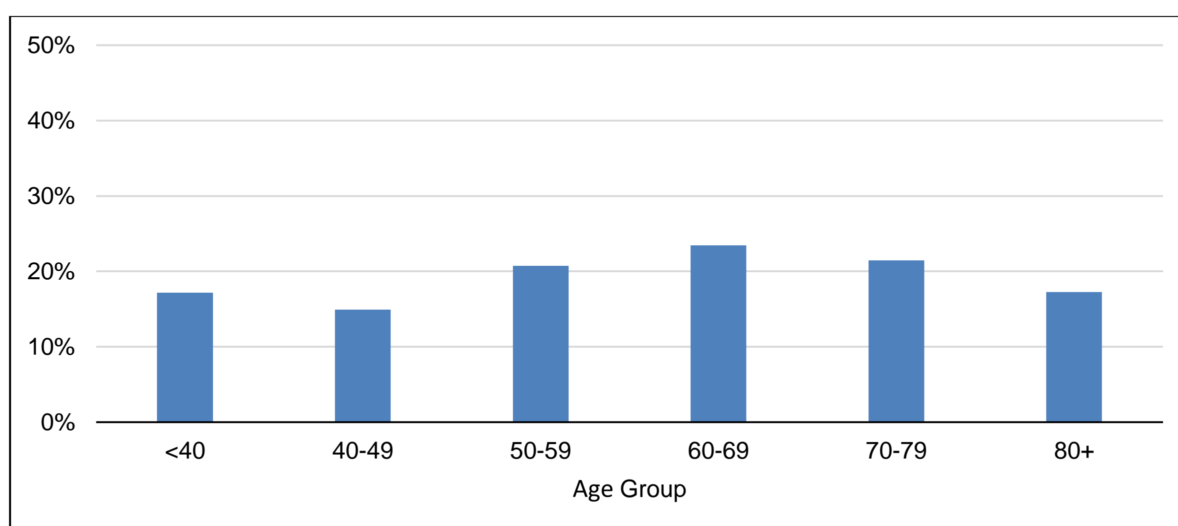


Note: Refer to Table A2.11 in Appendix A for the tabulated data

Other Paid Employment

Almost 20% of Active Fellows reported that they were involved in other forms of paid employment, with a higher proportion of older Fellows engaged in other forms of work (Figure 2.11).

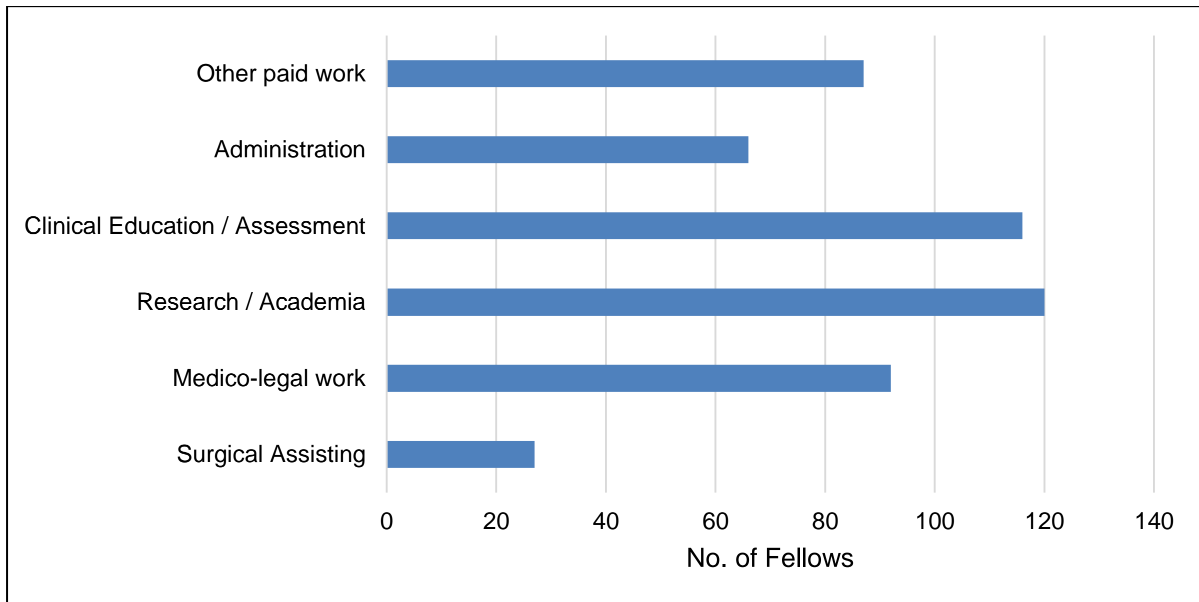
Figure 2.12: Percentage of Active Fellows who are involved in other forms of paid employment by age group



Note: Refer to Table A2.12 in Appendix A for the tabulated data

The most common forms of employment Fellows were engaged in were research/ academia, clinical education/ assessment and medico-legal work (Figure 2.13).

Figure 2.13: Other forms of paid employment for Fellows



Note: Refer to Table A2.13 in Appendix A for the tabulated data

Chapter 3 – Rural and Regional Practice

Key Findings

- Approximately 30% of Australian and 40% of New Zealand Fellows reported working in a rural or regional location of Australia or New Zealand; this includes those practicing in both metro and rural/regional areas.
- For the subset of Fellows reporting that they only worked in rural or regional locations, almost 75% were working on a full time basis in those rural or regional locations
- Almost two thirds of Fellows indicated no intention to change their current work hours in rural or regional areas.
- One in five Australian and New Zealand Fellows who work in rural or regional locations plan to decrease their work hours, while only eight percent of Australian and less than one percent of New Zealand rural or regional Fellows plan to increase their work hours over the next five years.

Characteristics of the rural workforce

Approximately 30% of Australian and almost 40% of New Zealand respondents reported that they worked in a rural or regional location; this includes those practicing in both capital cities/ metropolitan and rural or regional locations. For Australia, metropolitan or major cities were classified as areas with populations greater than 100,000 (e.g. Sydney, Melbourne, Newcastle, Geelong, Hobart, Gold Coast, Townsville). For New Zealand major cities included Auckland, Wellington, Christchurch, Hamilton and Dunedin.

The proportion of Fellows reporting that they worked in rural or regional locations only was 15.7% (same result as 2016) in Australia and 24.1% in New Zealand (a slight increase from 22% reported in 2016).

Figure 3.1a: Location of work for Active Fellows, Australia

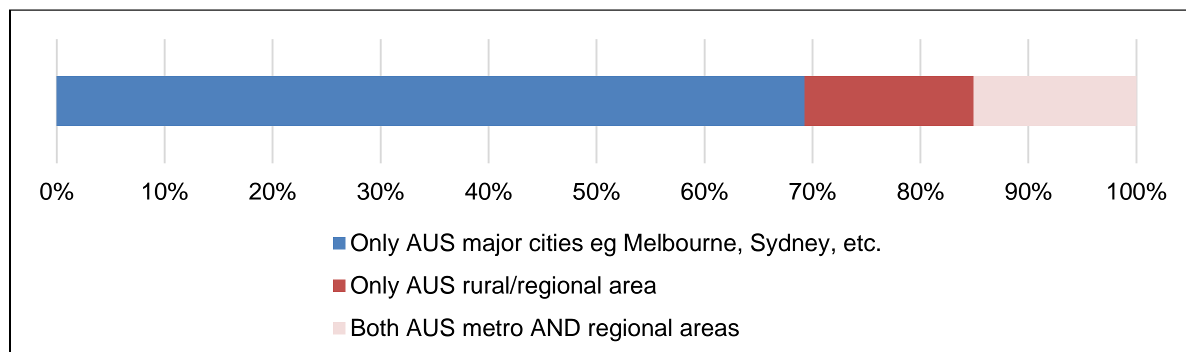
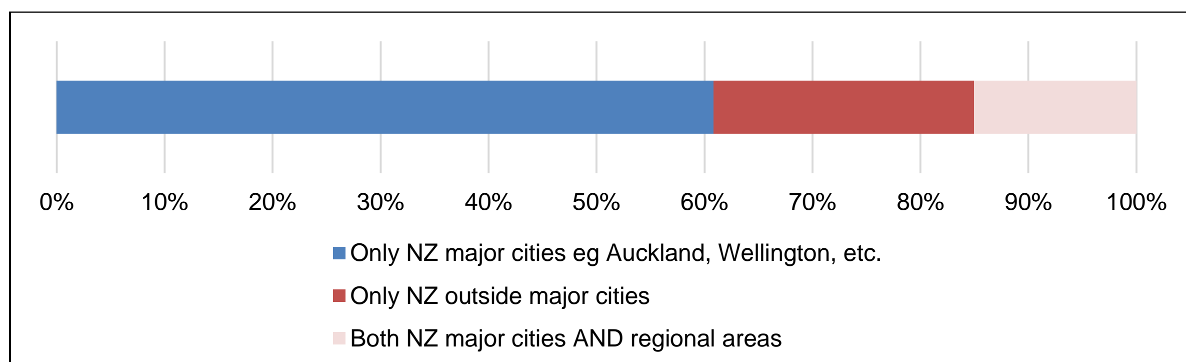


Figure 3.2b: Location of work for Active Fellows, New Zealand

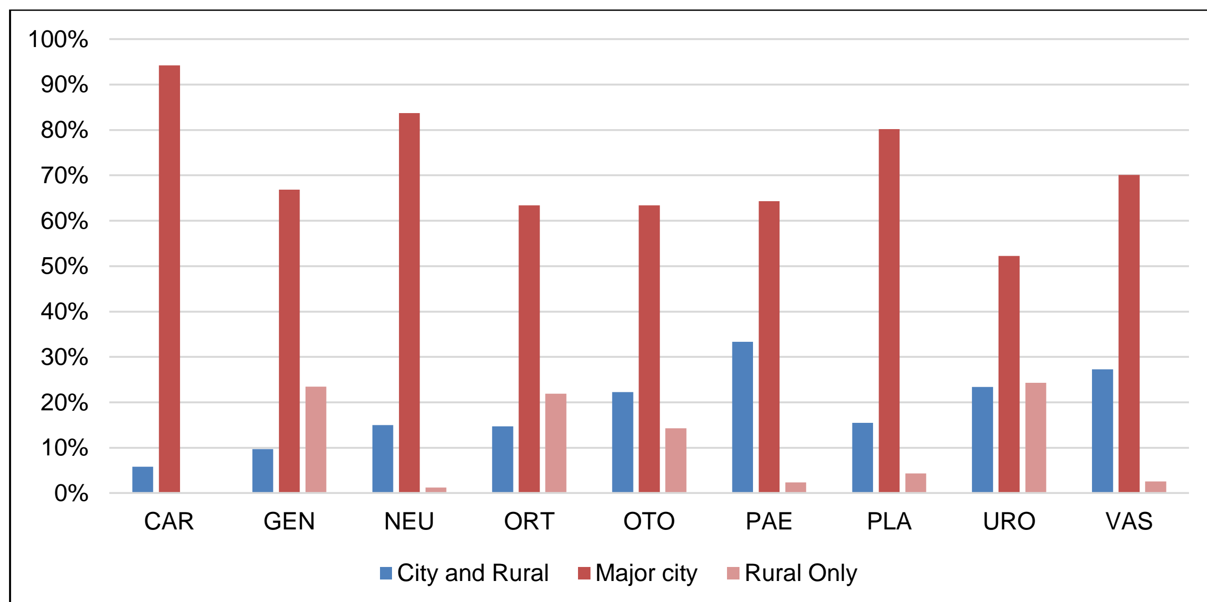


Note: Refer to Table A3.1 in Appendix A for the tabulated data

Approximately 48% of Urologists, 37% of Otolaryngologists and 37% Orthopaedic surgeons reported that they worked in a rural or regional area (including those practicing in both metropolitan and rural or regional areas).

When looking at the subset of Fellows who reported only working in rural or regional locations, a much lower proportion was evident. Of all specialties, General surgery had the highest proportion (23%) of Fellows reporting they worked solely in rural or regional locations. There were very few rural or regional surgeons in Cardiothoracic surgery, Neurosurgery, Paediatric surgery, Plastic and reconstructive surgery and Vascular surgery compared to the proportions of Fellows in General surgery, Orthopaedic surgery, Otolaryngology – Head and Neck surgery and Urology (Figure 3.2).

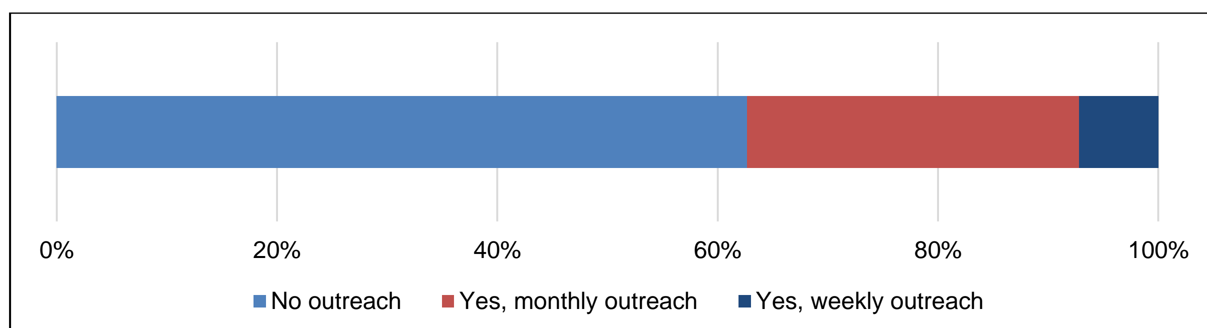
Figure 3.3: Percentage of Fellows practicing in a rural or regional area by surgical specialty



Note: Refer to Table A3.2 in Appendix A for the tabulated data

Respondents who reported working in both metropolitan and rural or regional locations and those who reported working in rural and regional locations only were asked about their outreach activities. Outreach surgery is defined as performing surgery in a town where the surgeon is not a resident and may not be available in person for ongoing post-operative care or follow up. Approximately 30% of Fellows in these groups reported engaging in outreach services on a monthly basis and 7% reported working in outreach services weekly basis (Figure 3.3).

Figure 3.4 Frequency of Fellows engaged in outreach services

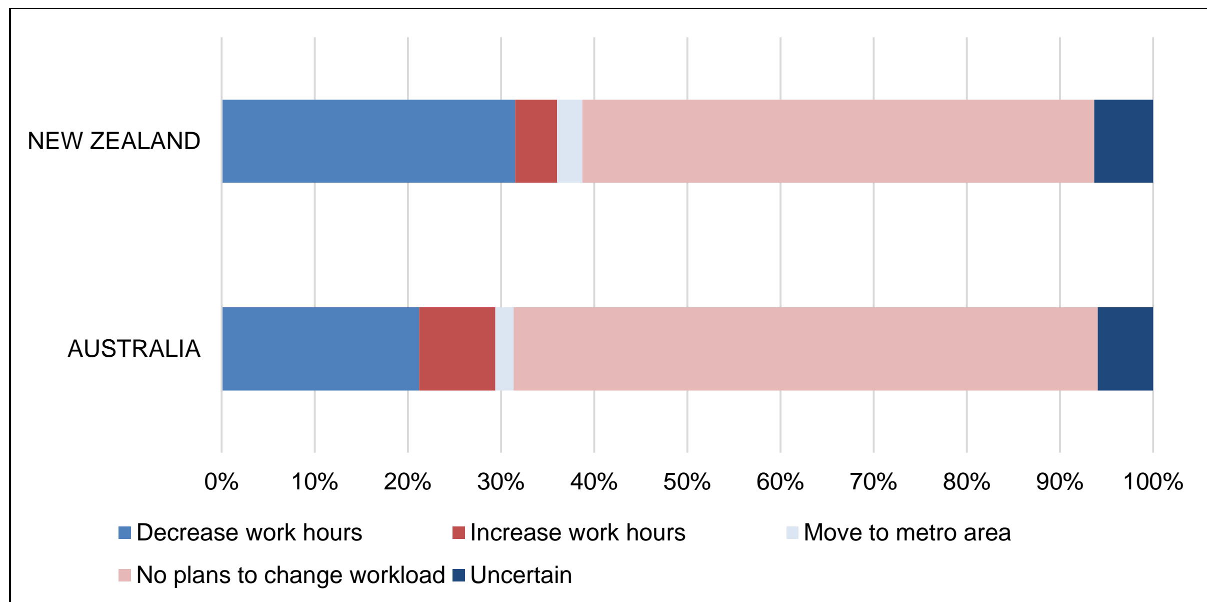


Note: Refer to Table A3.3 in Appendix A for the tabulated data

Respondents who reported working in both metropolitan and rural or regional locations and those who reported working in rural and regional locations only were also asked about their future work intentions.

The majority of these Fellows reported no intentions to change their workload over the next five years. Approximately 24% of Fellows intended to decrease their hours and 8% reported that they were planning to move to a metropolitan area or were uncertain about their future plans (Figure 3.4). These results reflect similar intentions reported for the 2016 Surgical Workforce Census.

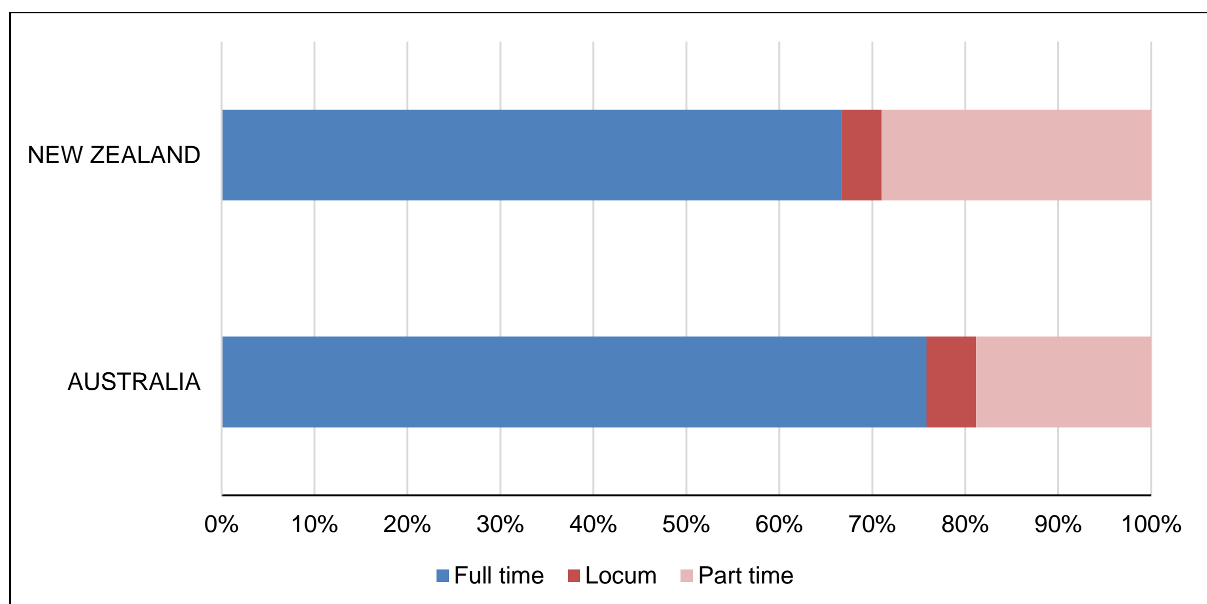
Figure 5.6: Future rural and regional work intentions



Note: Refer to Table A3.4 in Appendix A for the tabulated data

For the subset of Fellows who reported working in rural or regional locations only (N=207 Australia, N=69 New Zealand), almost 75% were working on a full time basis (Figure 3.5).

Figure 3.7: Employment status of Fellows who work in a rural or regional location only

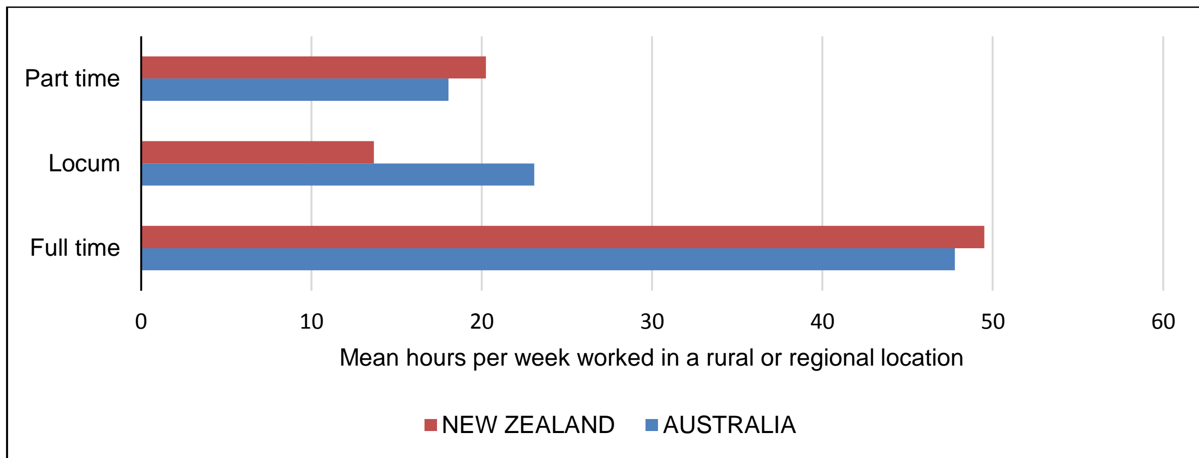


Note: Please refer to Table A3.5 in Appendix A for the tabulated data

The subset of Fellows who reported working in rural and regional locations only were also asked about their average weekly hours worked.

The average hours worked per week for Fellows who work in a rural or regional location are similar to the overall mean hours per week for all full time Fellows (48.6 hours compared to 50 hours for all respondents). Locums who worked in a regional or rural setting reported working on average 18.4 hours per week compared to 25 hours for all respondents and part time Fellows who worked in a rural or regional setting reported working on average 19.2 hours worked per week compared 19.6 hours for all respondents (Figure 3.6).

Figure 3.8: Weekly hours worked for rural and regional Fellows by employment status



Note: Please refer to Table A3.6 in Appendix A for the tabulated data

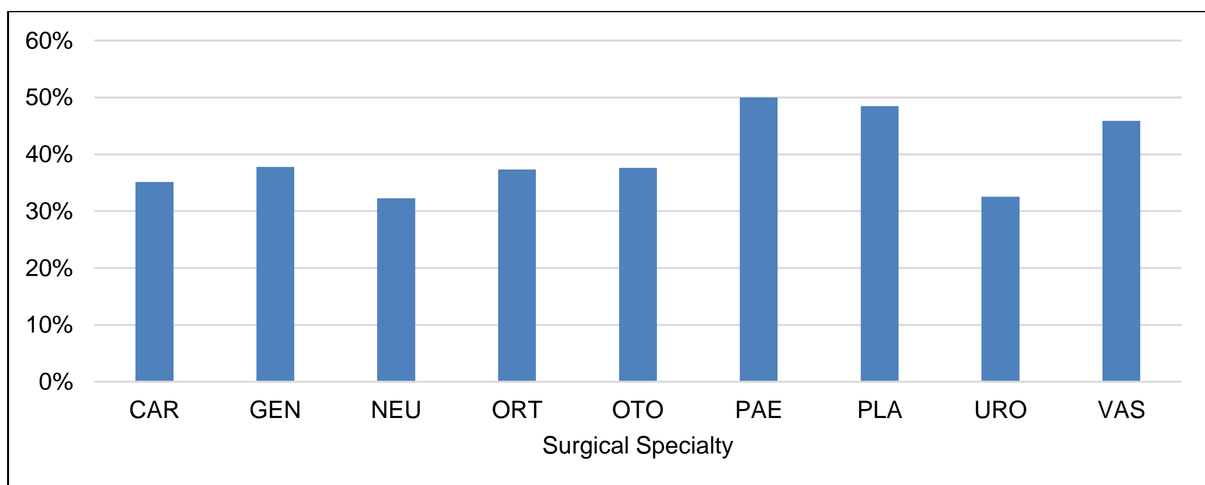
Chapter 4 – Pro bono work

Summary

- More than one in three Fellows participated in volunteers/ pro-bono work in 2018.
- Non-clinical work and clinical education were the most nominated pro bono activities.
- One in five Fellows were involved in RACS activities such as educational instructor, surgical mortality audit assessor and examiner.
- Fellows reported working on average 18 hours per month on pro bono activities.

More than one in three Fellows undertook volunteer/ pro-bono work (excluding SET training and supervision). By specialty, the largest proportions of volunteers were from Paediatric surgery, Plastic and reconstructive surgery and Vascular surgery (Figure 4.1).

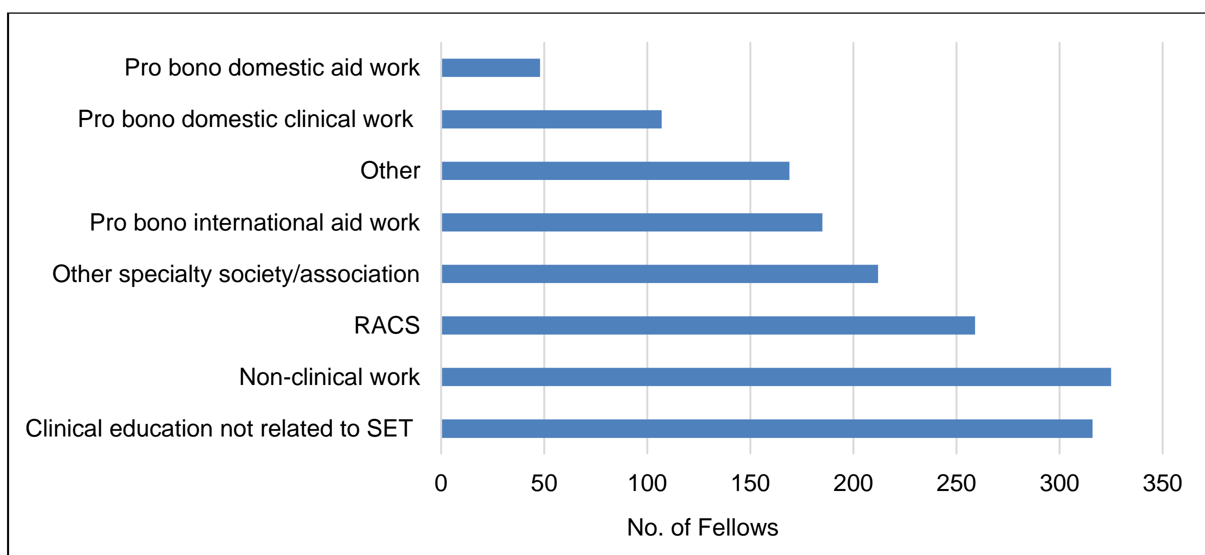
Figure 4.1: Percentage of Fellows who undertake volunteer/ pro-bono work by specialty



Note: Please refer to Table A4.1 in Appendix A for the tabulated data

The most common volunteer activities were non-clinical activities such as committee appointments (N=325) and clinical education not related to SET (N=316). Domestic clinical work, aid work and domestic aid work were nominated by the least number of Fellows (N=107 and N=48 respectively).

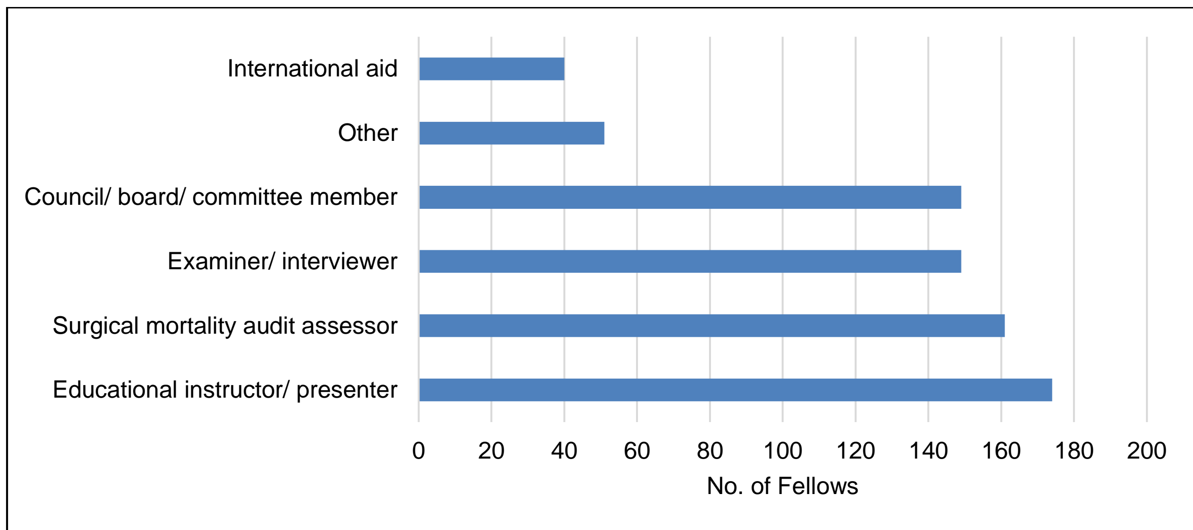
Figure 4.2: Types of pro bono/ volunteer activities Fellows participate in



Note: Please refer to Table A4.2 in Appendix A for the tabulated data

More than one in five respondents reported that they volunteer or do pro bono work for RACS, a decrease from the one in three recorded in 2016. The two most common volunteer roles at RACS were educational instructor/ presenter and surgical mortality audit assessor (Figure 4.3).

Figure 4.3: Types of pro bono/ volunteer roles Fellows participate for RACS



Note: Please refer to Table A4.3 in Appendix A for the tabulated data

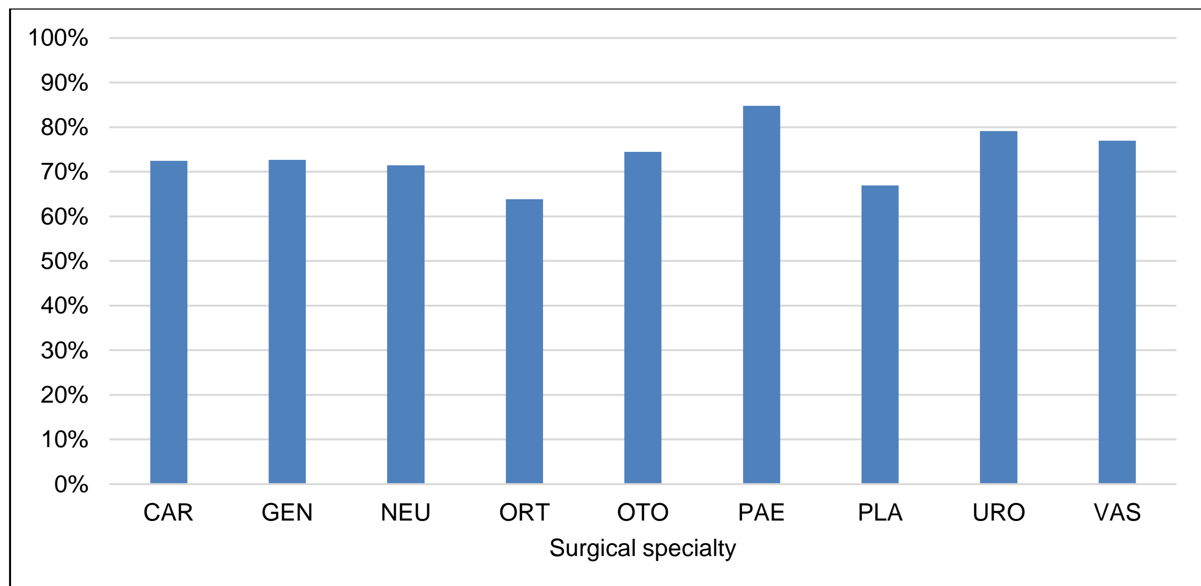
Chapter 5 – SET Training

Summary

- Almost three quarters of the surveyed Fellows were involved in SET training.
- Fellows involved in SET training spent an average of 9.7 hours a week in the public sector on supervision and related administrative education work related to SET.

Approximately 71% of Australian and 73% of New Zealand respondents reported that they were involved in SET training. Paediatric surgery, Urology and Vascular surgery had the highest proportion of representatives involved with SET training, and Orthopaedic surgery and Plastic surgery had the lowest (Figure 5.1). These results are consistent with the 2016 Surgical Workforce Census.

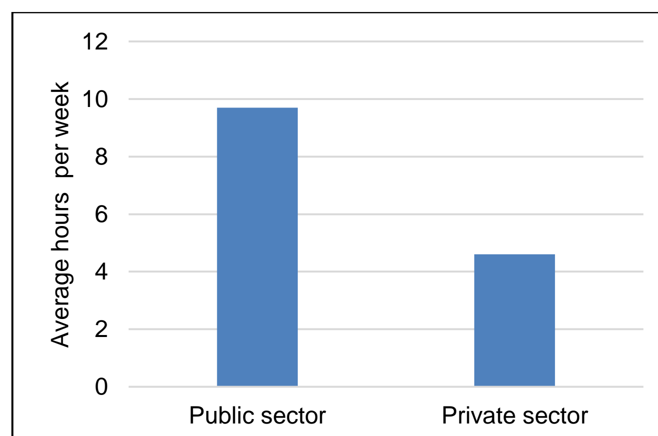
Figure 5.1: Percentage of Fellows involved in SET training or supervision by surgical specialty



Note: Please refer to Table A5.1 in Appendix A for the tabulated data

A considerable amount of time is spent on SET training supervision and related work, including administrative duties and educational programs (9.7 hours a week in the public sector, an increase from 8 hours reported in 2016).

Figure 5.2: Mean hours per week Fellows spent on SET training and SET-related work



Note: Please refer to Table A5.2 in Appendix A for the tabulated data

Chapter 6 – Health and Work life Balance

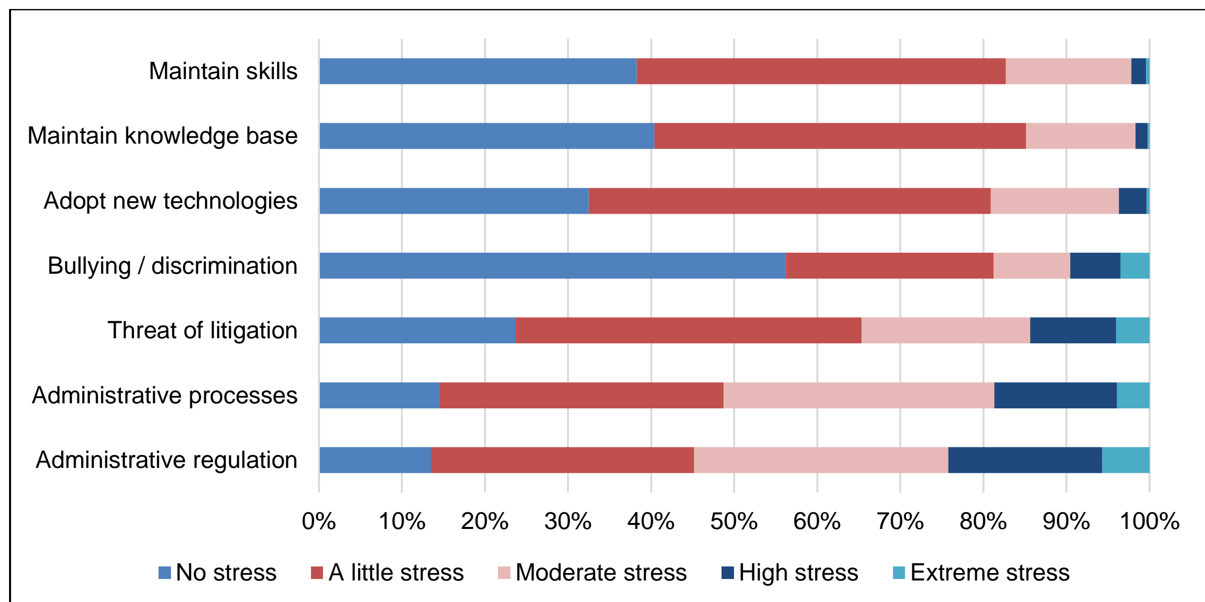
Summary

- Administrative regulation and processes remain a primary source of high stress for Fellows.
- 9% of Fellows reported seeking professional assistance for stress or mental health issues in the last two years.
- Two in three Fellows monitored their health in the last two years, visiting a medical doctor for a health check-up or at regular intervals as dictated by existing medical conditions.
- One quarter of female respondents reported returning to work within six weeks of taking parental leave.

Health

Fellows were asked to rate their stress levels experienced for a range of sources and issues. High or extreme stress was reported most frequently for administrative regulation (24%) and administrative processes (19%) (Figure 6.1). This was followed by the threat of litigation (14.4%) and bullying or discrimination (9.6%). These findings are similar to the 2016 census results.

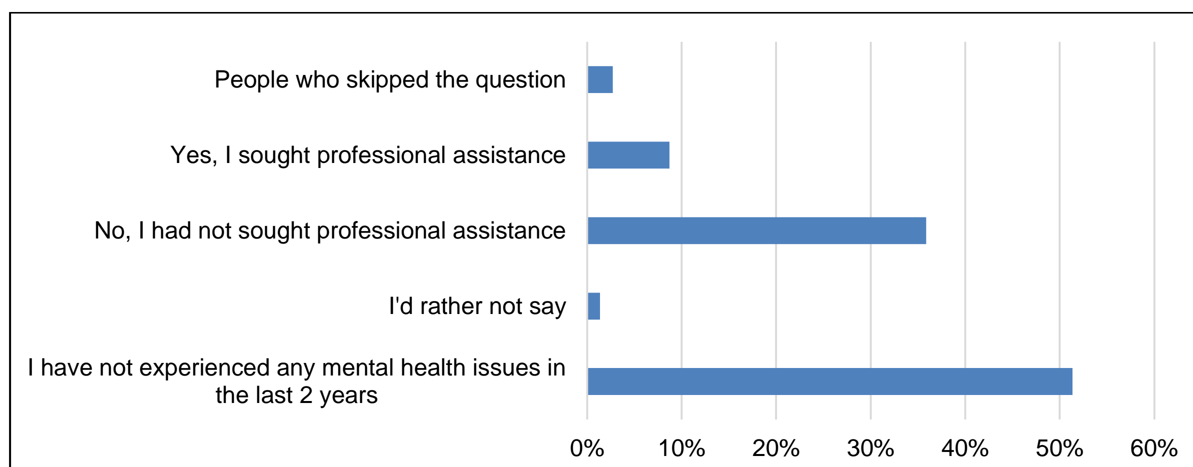
Figure 6.1: Sources of Fellows' self-rated stress levels



Note: Please refer to Table A6.1 in Appendix A for the tabulated data

Fellows were asked whether they have sought professional assistance to deal with stress or other mental health issues in the last two years. Over 50% (N=868) reported that they have not experienced any mental health issues and almost 36% (N=606) reported that they had not sought professional assistance. Almost 9% of Fellows reported that they had sought professional assistance (N=147), compared to 7.6% (N=164) in 2016 (Figure 6.2).

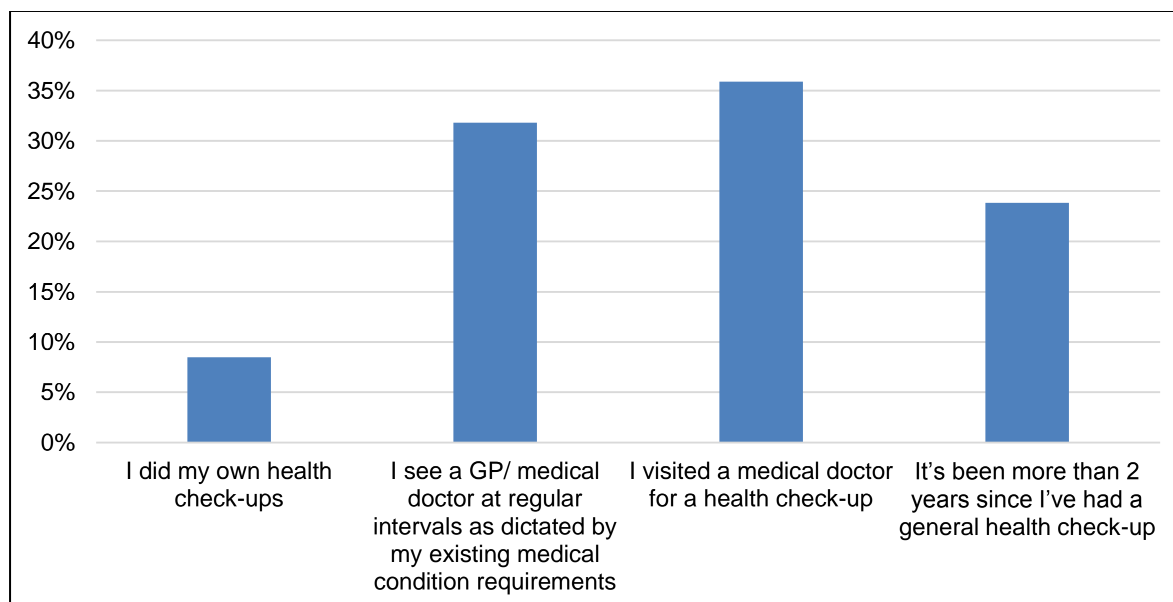
Figure 6.2: Proportion of Fellows who have sought professional assistance to deal with stress or a mental health issue in the last two years



Note: Please refer to Table A6.2 in Appendix A for the tabulated data

Most Fellows have had a physical health check up in the last two years (Figure 6.3). Almost 25% of Fellows reported that it has been more than two years since their last general health check-up, compared to 28.6% in 2016. There has been a minor decrease in the number of Fellows doing their own health check-ups (8.5%, 2018 compared to 10%, 2016).

Figure 6.3: How Fellows monitored their general health in the last two years

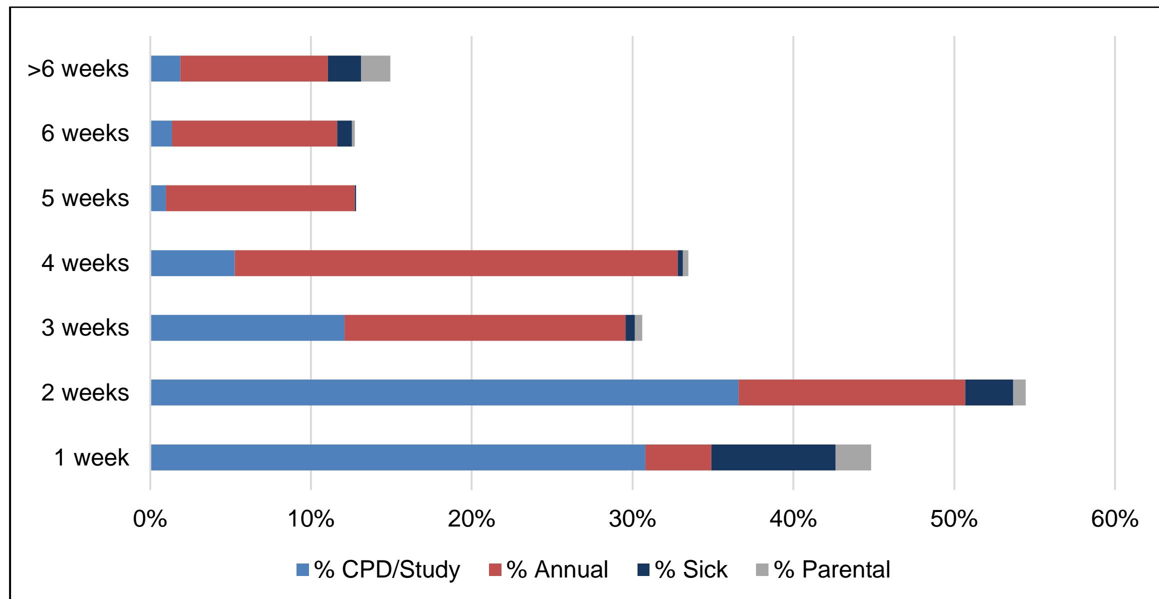


Note: Please refer to Table A6.3 in Appendix A for the tabulated data

Leave

Nearly all Fellows took either study leave or annual leave in the past 12 months. The common period of leave was two weeks for CPD/ study leave and four weeks for annual leave. This is similar Census results for 2016 and 2014 (Figure 6.4).

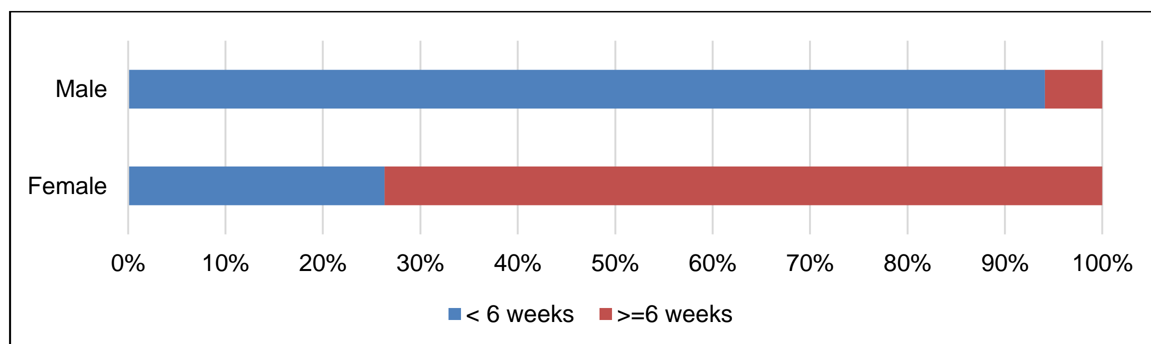
Figure 6.4: Distribution of annual and study leave Fellows took over the past 12 months



Note: Please refer to Table A6.4 in Appendix A for the tabulated data

Almost 75% of female Fellows (N=28) who reported taking parental leave during 2018 took six weeks or more week of leave and almost 95% of male Fellows (N=48) took less than six weeks (most taking one to two weeks). Approximately one quarter of female Fellows (N=10) reported returning to work within six weeks of taking parental leave (Figure 6.5).

Figure 6.5: Duration of parental leave Fellows took over the past 12 months



Note: Please refer to Table A6.5 in Appendix A for the tabulated data

Chapter 7 – Future Work Intentions

Summary

- Fellows under 40 years of age intend to maintain their preferred weekly work hours over the next 10 years.
- Fellows aged 50 years and over report intent to decrease work hours over the next 10 years.
- Almost 75% of Fellows aged 65 years or older intend to continue in paid employment, with the primary reason being that they are doing work that they enjoy.

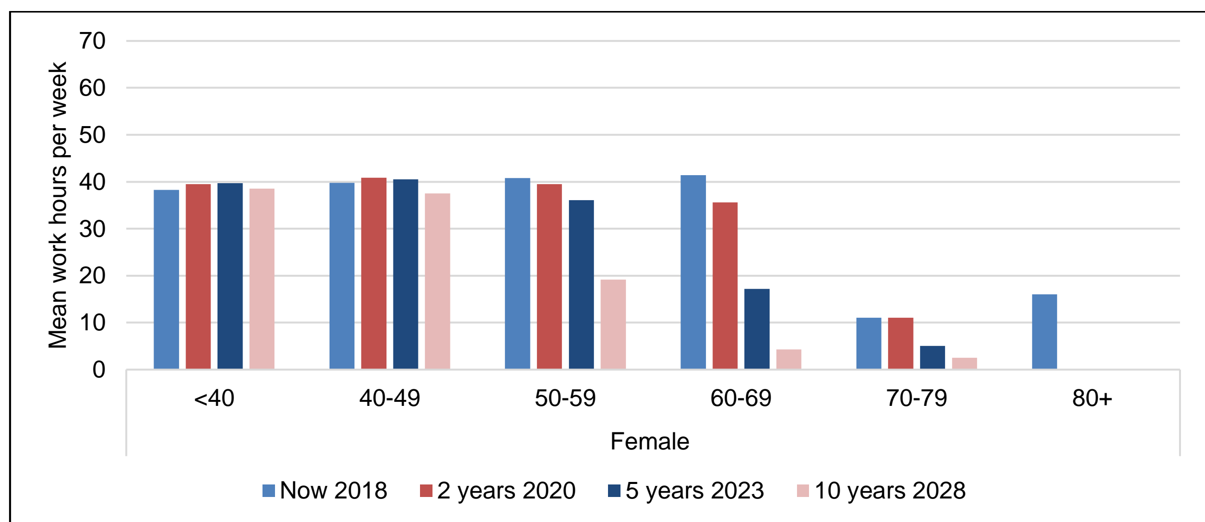
Future Work Hours

Fellows were asked to nominate their preferred hours worked per week now and in the future, at two years, five years and ten years (Figure 7.1 a & b).

40 years or less

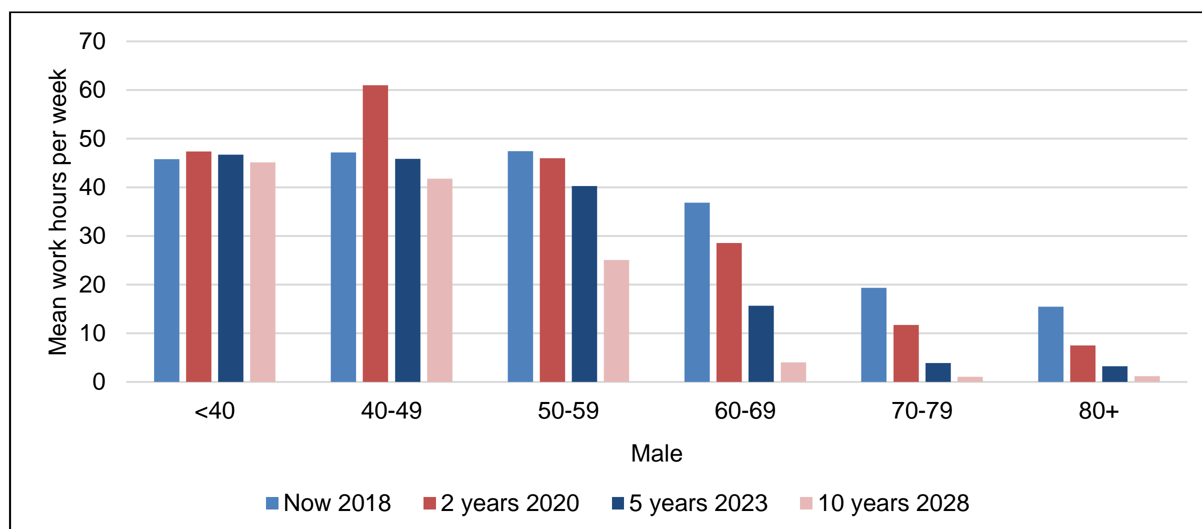
The 2018 preferred work hours of male Fellows aged less than 40 years is greater than their female counterparts, with males preferring to work on average 45.8 hours per week and females 38.3 hours on average per week. Both male and female Fellows in this age range plan for their hours worked per week over the next 10 years to remain relatively steady.

Figure 7.1a: Female Fellows current and future work intentions over the next 10 years



Note: Please refer to Table A7.1 in Appendix A for the tabulated data

Figure 7.2b: Male Fellows current and future work intentions over the next 10 years



Note: Please refer to Table A7.1 in Appendix A for the tabulated data

40 – 49 years
The current preferred work hours of male Fellows aged 40-49 years is greater than for female Fellows in this age group (47.2 hours and 39.8 hours respectively). This difference in hours is reported to widen, as male Fellows reported an intention to increase their average hours per week significantly in two years time (2020) to work on average 61 hours per week. Both male and female Fellows in this age range intend to begin reducing their hours in hours in ten years (2028).

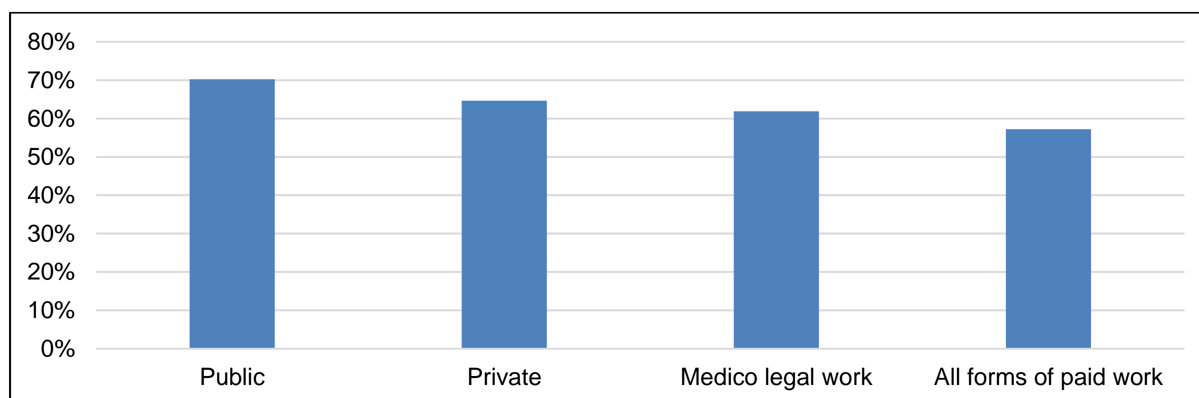
50 – 59 years
Male Fellows aged 50 – 59 years report a preference for working on average more hours per week than female Fellows (47.4 hours and 40.8 respectively), however both sexes in this age group intend on reducing work hours in five years time.

60 – 69 years
Female Fellows reported a preference for working more hours than their male counterparts in 2018 (41.4 hours compared to 36.9 hours) in the 60 – 69 years age range. This change continues for future hours worked, with female Fellows planning on working more hours than males in two years (2020) and five years time (2023). Both sexes plan to reduce their weekly working hours in ten years to approximately 4 hours a week.

Retirement
Fellows were asked to indicate when they intend to retire from a range of surgical work within the next ten years. Less than 9% of Fellows aged less than 50 years reported that they intend to retire from clinical practice in the public sector within the next 10 years (refer to Appendix A7.2).

For those respondents aged 50 and over, 70% of Fellows reported that they intend to retire from public practice within the next ten years and 65% intend to retire from private practice within the next ten years. In total, over 57% of Fellows aged over 50 years plan to retire from all forms of paid work within the next ten years (Figure 7.2).

Figure 7.2: Proportion of Fellows aged 50 years or older who intend to retire within the next 10 years from clinical practice and all forms of paid work

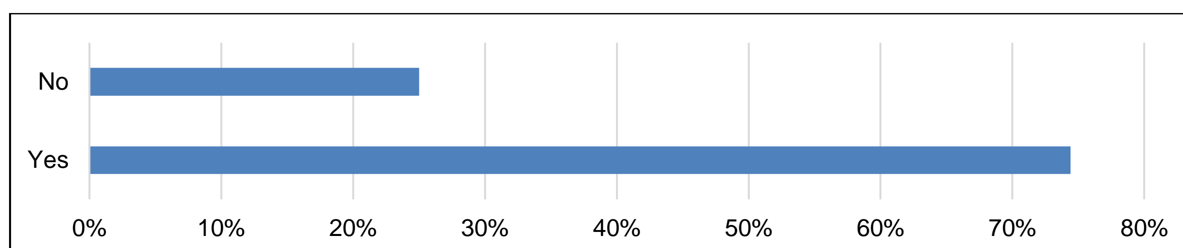


Note: Please refer to Table A7.2 in Appendix A for the tabulated data

Future Work Plans for Fellows Aged 65 or Older

Almost 75% (N=264) of Fellows aged 65 years or older reported an intention to be engaged in paid employment for the next two years (Figure 7.3).

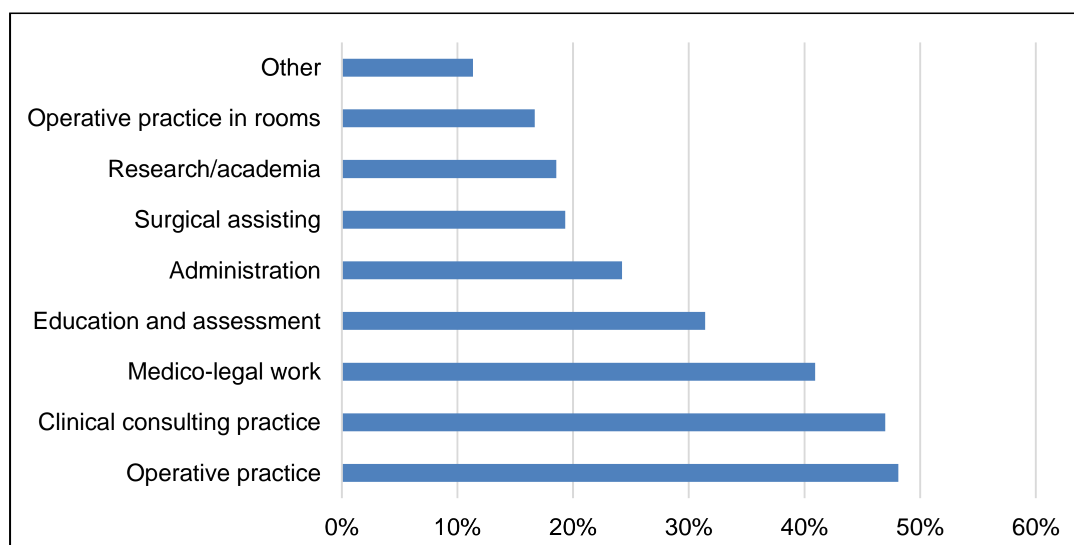
Figure 7.3: Proportion of Fellows aged 65 years or older who intend to be engaged in paid employment for the next two years



Note: Please refer to Table A7.3 in Appendix A for the tabulated data.

The most common types of employment Fellows were planning to be engaged in were operative practice in hospital/ day surgery units, clinical consulting and medico-legal work (Figure 7.4).

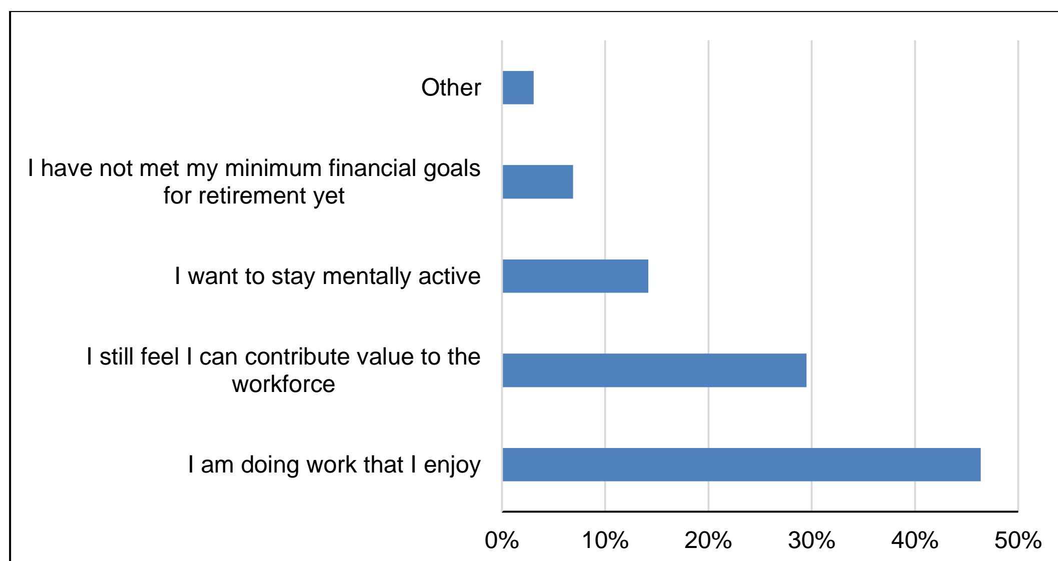
Figure 7.4: Type of work Fellows aged 65 or older planned to do in the next two years



Note: Please refer to Table A7.4 in Appendix A for the tabulated data

Almost half of the Fellows aged 65 years and older reported that the main reason for continuing in paid employment was because they are doing work that they enjoy and almost 30% reported their main reason was because they believed that they could still contribute value to the workforce (Figure 7.5). This is consistent with the 2016 Surgical Workforce Census results.

Figure 7.5: Main reason why Fellows aged 65 years or older continue to be engaged in paid employment for the next 2 years



Note: Please refer to Table A7.5 in Appendix A for the tabulated data.

RACS would like to acknowledge and thank all of the Fellows who took the time to participate in the 2018 Surgical Workforce Census. The census results inform ongoing workforce planning and advocacy.

REFERENCES

1. Royal Australasian College of Surgeons. Surgical Workforce 2016 Census Report. Melbourne: Royal Australasian College of Surgeons, 2017. From: https://umbraco.surgeons.org/media/1698/2017-05-26_2016-surgical-workforce-census-full-report_final.pdf. Accessed August 2019.

2. Royal Australasian College of Surgeons. Activities Report 2018. Melbourne: Royal Australasian College of Surgeons, 2019. From: https://umbraco.surgeons.org/media/4125/racs-activity-report-2019-fa_web.pdf. Accessed August 2019.

3. Royal Australasian College of Surgeons. Surgical Workforce 2014 Census Report. Melbourne: Royal Australasian College of Surgeons, 2015. From: https://umbraco.surgeons.org/media/1697/2015-06-05_rpt_-2014_census.pdf. Accessed August 2019.

4. Royal Australasian College of Surgeons. Standards for Safe Working Hours and Conditions for Fellows, Surgical Trainees and International Medical Graduates. Melbourne: Royal Australasian College of Surgeons, 2007. From: https://umbraco.surgeons.org/media/1671/position-paper-standards-for-safe-working-hours.pdf. Accessed August 2019

APPENDIX A

Chapter 1 Supplementary data

Appendix A1.1 Sex profile of Active Census respondents and Active RACS Fellows, 2018

	2018 Census Active Respondents	2018 Activities Report
Female	275	788
Male	1415	6333
Total	1690	7121

Exclusions: Fellows not currently living in Australia or New Zealand, retired Fellows.

Appendix A1.2: Age profile of Active Census respondents and Active RACS Fellows, 2018

	2018 Census Active Respondents	2018 Activities Report
<40	185	786
40-49	468	2071
50-59	451	1601
60-69	349	975
70+	237	664
Total	1690	7121

Exclusions: Fellows not currently living in Australia or New Zealand, retired Fellows.

Appendix A1.3: Location profile of Active Census respondents and Active RACS Fellows, 2018

	2018 Census Active Respondents	2018 Activities Report
ACT	25	99
NSW	406	2001
NT	8	30
QLD	255	1182
SA	140	539
TAS	28	117
VIC	404	1604
WA	123	554
NZ	301	995
Total	1690	7121

Exclusions: Fellows not currently living in Australia or New Zealand, retired Fellows.

Appendix A1.4: Specialty profile of Active Census respondents and Active RACS Fellows, 2018

	2018 Census Respondents N	2018 Activities Report N
CAR	69	263
GEN	632	2524
NEU	84	303
ORT	365	1794
OTO	180	656
PAE	46	144
PLA	121	594
URO	115	582
VAS	78	261
Total	1690	7121

Exclusions: Fellows not currently living in Australia or New Zealand, retired Fellows.

Appendix A1.5: Fellowship status of Census respondents, 2018

	N	%
Active Fellow	1445	76.7
Semi-Retired Fellow	238	12.6
Retired Fellow	200	10.6
Total	1883	100.0

Exclusions: Fellows not currently living in Australia or New Zealand.

Appendix A1.6: Age distribution and Fellowship status of Census respondents, 2018

Age Group	Active Fellow	Semi-Retired Fellow	Retired Fellow	N	%
<40	184	1	0	184	9.8
40-49	468	0	0	468	24.9
50-59	450	1	1	452	24.0
60-69	280	64	19	363	19.3
70-79	59	143	107	309	16.4
80+	4	29	73	106	5.6
Total	1445	238	200	1883	100.0

Exclusions: Fellows not currently living in Australia or New Zealand.

Chapter 2 Supplementary data

Appendix A2.1: Employment status of Fellows by country

Country	Full-time	Part-time	Locum	Parental leave	Unemployed	Retired	N
Australia	1031	292	30	11	19	161	1544
New Zealand	229	58	8	3	2	39	339
Total	1260	350	38	14	21	200	1883

Exclusions: Fellows not currently living in Australia or New Zealand.

Appendix A2.2: Employment status of Fellows by age group

Age group	Full-time	Part-time	Locum	Parental leave	Unemployed	Retired	N
<40	142	18	13	11	1	0	185
40-49	418	42	4	3	1	0	468
50-59	421	25	4	0	1	1	452
60-69	240	94	7	0	3	19	363
70-79	34	145	10	0	13	107	309
80+	5	26	0	0	2	73	106
Total	1260	350	38	14	21	200	1883

Exclusions: Fellows not currently living in Australia or New Zealand.

Appendix A2.3: Mean hours worked per week and preferred weekly work hours by workforce status

Status	Hours worked per week			Preferred weekly work hours		
	N	Mean	SD	N	Mean	SD
Full-time	1260	50.0	10.2	1235	46.2	9.6
Locum	38	25.0	22.8	35	32.4	23.4
Part-time	350	19.6	11.4	337	20.4	12.5
Total	1648	43.0	16.7	1607	40.5	15.1

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; unemployed or parental leave.

Appendix 2.4: Mean hours worked per week by age group

Age Range	Mean			Standard Deviation			N
	M	F	Total	M	F	Total	
<40	44.6	41.9	43.5	13.8	18.7	15.9	142
40-49	50.1	43.1	48.3	11.5	12.3	12.1	418
50-59	50.5	44.8	49.8	11.2	13.9	11.7	421
60-69	39.4	48.8	40.0	16.6	14.0	16.6	240
70-79	19.5	11.0	19.5	16.5	1.4	16.5	34
80+	14.1	16.0	14.1	12.4	N/A	12.2	5
Total	42.2	43.3	42.3	17.8	15.0	17.3	1260

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; unemployed or parental leave.

Appendix A2.5: Mean hours worked per week and preferred weekly work hours of full-time Fellows by surgical specialty

	Current hours worked per week			Preferred hours to work per week		
	Mean	SD	N	Mean	SD	N
CAR	51.6	10.2	52	48.1	9.6	52
GEN	49.4	10.0	456	45.5	9.8	441
NEU	55.1	11.1	65	50.2	10.8	64
ORT	49.6	10.2	281	47.0	9.7	278
OTO	48.8	9.9	126	44.5	8.6	124
PAE	49.6	7.9	36	45.7	7.3	35
PLA	49.9	10.6	92	46.1	10.4	91
URO	51.5	10.2	91	46.7	8.4	89
VAS	49.4	9.9	61	45.3	7.8	61
Total	50.0	10.2	1260	46.2	9.6	1235

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; Fellows not currently working full time.

Appendix A2.6: Fellows working in public or private practice by surgical specialty

	N	% Public practice only	% Private practice only	% Mixed practice	% Neither public or private
CAR	69	21.7	7.2	58.0	13.0
GEN	609	25.0	11.5	57.3	6.2
NEU	81	17.3	21.0	51.9	9.9
ORT	355	9.9	24.2	59.4	6.5
OTO	176	11.9	9.1	73.9	5.1
PAE	43	30.2	2.3	62.8	4.7
PLA	119	10.1	31.9	49.6	8.4
URO	115	14.8	13.0	70.4	1.7
VAS	78	11.5	16.7	66.7	5.1
Total	1645				

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A2.7: Number of Fellows working in public or private practice by surgical specialty

	Public practice only	Private practice only	Mixed practice	Neither public or private	N
CAR	15	5	40	9	69
GEN	152	70	349	38	609
NEU	14	17	42	8	81
ORT	35	86	211	23	355
OTO	21	16	130	9	176
PAE	13	1	27	2	43
PLA	12	38	59	10	119
URO	17	15	81	2	115
VAS	19	13	52	4	78
Total	288	261	991	105	1645

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A2.8: Frequency of emergency on-call Fellows took by work sector

	Public sector		Private sector	
	N	%	N	%
1:1	28	2.7	62	13.6
1:2	43	3.4	24	2.0
1:3	101	4.1	45	1.9
1:4	180	7.5	64	2.7
1:5	154	7.0	60	2.6
1:6	113	5.5	49	2.2
1:7	87	4.5	33	1.5
1:8	99	5.3	33	1.5
1:9	35	2.0	10	0.5
1:10	77	4.5	24	1.1
≥1:10	138	8.4	53	2.6
No emergency on-call	224		781	
Total	1279		1238	

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; unemployed or on parental leave.

Appendix A2.9: Method used to obtain private billing income, considering total private procedural income

	N	%
No response	383	27.6
Only "no gap" (no other additional fees)	271	19.5
>50% "no gap" or "known gap"	265	19.1
"No gap" but "known gap" when available or charge a co-payment	218	15.7
<50% "no gap" or "known gap"	146	10.5
Hardly ever use "no gap" or "known gap"	106	7.6
Total	1389	100.0

Exclusions: Fellows not currently living in Australia or New Zealand; New Zealand Fellows; retired Fellows; unemployed or on parental leave.

Appendix A2.10: Consideration of a fair professional fee, ignoring current private billing practices

	N	%
AMA is about right	511	36.8
No response	377	27.1
Higher than private health insurance amount but less than AMA	248	17.9
The private health insurance "no gap" amount	98	7.1
More than AMA rate	76	5.5
The private health insurance "known gap" amount (when available)	64	4.6
The "schedule fee"	511	1.1
Total	1389	100.0

Exclusions: Fellows not currently living in Australia or New Zealand; New Zealand Fellows; retired Fellows; unemployed or on parental leave.

Appendix A2.10a: Crosstabulation of Fellows' method of private billing and what they considered to be a fair professional fee

	What Fellows consider to be a fair professional fee							
Method used to obtain private billing income	AMA is about right	Higher than private health insurance amount but less than AMA	More than AMA rate	The "schedule fee"	The private health insurance "known gap" amount (when available)	The private health insurance "No gap" amount	Did not answer	Total
"No gap" but "known gap" when available or charge a co-payment	105	72	6	2	25	6	2	218
<50% "No gap" or "known gap"	96	24	21	0	5	0	0	146
>50% "No gap" or "known gap"	158	77	18	0	9	3	0	265
Hardly ever use "No gap" or "known gap"	57	12	29	3	4	1	0	106
Only "No gap" (no other additional fees)	92	61	2	10	19	86	1	271
Did not answer	3	2	0	0	2	2	374	383
Total	511	248	76	15	64	98	377	1389

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A2.11: Consideration of a fair professional fee, ignoring current private billing practices, by surgical specialty

	CAR	GEN	NEU	ORT	OTO	PAE	PLA	URO	VAS	Total
AMA is about right	21	156	28	124	70	9	33	44	26	511
Did not answer	20	188	21	61	26	15	17	18	11	377
Higher than private health insurance amount but less than AMA	9	86	17	67	18	6	11	19	15	248
The private health insurance "no gap" amount	9	57	4	7	1	2	6	5	7	98
More than AMA rate	0	12	4	17	17	0	18	7	1	76
The private health insurance "known gap" amount (when avail)	0	30	1	14	3	4	3	5	4	64
The "schedule fee"	0	6	0	3	1	2	1	1	1	15

Total	59	535	75	293	136	38	89	99	65	1389

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A2.12: Percentage of Fellows who are involved in other forms of paid employment by age group

	Yes	%	N
<40	29	7.2	169
40-49	68	14.9	455
50-59	92	20.7	444
60-69	80	23.5	341
70-79	41	21.5	191
80+	5	17.2	29
Total	315	19.3	1629

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A2.13: Other forms of paid employment for Fellows

	N
Surgical Assisting	27
Medico-legal work	92
Research / Academia	120
Clinical Education / Assessment	116
Administration	66
Other paid work	87

Multiple responses given. Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Chapter 3 Supplementary data

Appendix A3.1: Location of work for Active Fellows in Australia and New Zealand

	N	%
Only AUS major cities e.g. Melbourne, Sydney, etc.	920	69.3
Only AUS rural/regional area	208	15.7
Both AUS metro AND regional areas	200	15.1
Only NZ major cities e.g. Auckland, Wellington, etc.	174	60.8
Only NZ outside major cities	69	24.1
Both NZ major cities AND regional areas	43	15.0
Total	1614	

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A3.2: Fellows practising in a rural or regional area by surgical specialty

	N				%		
	City and Rural	Major city	Rural only	Total	City and Rural	Major city	Rural only
CAR	4	65	0	69	5.8	94.2	0
GEN	58	399	140	597	9.7	66.8	23.5
NEU	12	67	1	80	15.0	83.8	1.3
ORT	51	220	76	347	14.7	63.4	21.9
OTO	39	111	25	175	22.3	63.4	14.3
PAE	14	27	1	42	33.3	7.3	2.4
PLA	18	93	5	116	15.5	10.4	4.3
URO	26	58	27	111	23.4	8.4	24.3
VAS	21	54	2	77	27.3	7.8	2.6
Total	243	1094	277	1614	27.3	70.1	2.6

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A3.3: Frequency of paid outreach surgery for Active Fellows who work in in rural only or rural and metropolitan centres

	N	%	Mean hours
No outreach services	322	62.6	
Yes, monthly outreach	155	30.2	14.1 per month
Yes, weekly outreach	37	7.2	10.8 per week
Total	514	100.0	

Exclusions: Fellows working only in metropolitan locations, Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A3.4: Fellows' rural or regional area future work intentions over the next five years

	Australia	New Zealand	N	%
No plans to change work pattern	254	61	315	23.4
Decrease work hours	86	35	121	7.4
Increase work hours	33	5	38	2.1
Move to metropolitan area	8	3	11	61.0
Uncertain	24	7	31	6.0
Total	559	152	711	100.0

Exclusions: Fellows working only in metropolitan locations, Fellows not currently living in Australia or New Zealand; retired Fellows; missing work location responses

Appendix A3.5: Workforce status of Fellows who work in a rural or regional area

		Full time	Locum	Part time	N
Rural or regional only	Australia	157	11	39	207
	New Zealand	46	3	20	69
	Total	203	14	59	276

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A3.6: Mean hours worked per week for Fellows who work in a rural or regional area

		Full time	Locum	Part time	N
Rural or regional only	Australia	47.8	23.1	18.1	207
	New Zealand	49.5	13.7	20.3	69
	Total	48.6	18.4	19.2	276

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Chapter 4 Supplementary data

Appendix A4.1: Percentage of Fellows who undertake volunteer/ pro-bono work by surgical specialty

	Pro-bono work	%	N
CAR	26	35.1	74
GEN	260	37.8	688
NEU	30	32.3	93
ORT	146	37.3	391
OTO	73	37.6	194
PAE	27	50.0	54
PLA	63	48.5	130
URO	41	32.5	126
VAS	39	45.9	85
Total	705	38.4	1835

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A4.2: Types of pro bono/ volunteer activities Fellows participate in

N=689, Avg hours per month = 18.4	N	%
Clinical education not related to SET	316	45.9
Non-clinical work	325	47.2
RACS	259	37.6
Other specialty society/association	212	30.8
Pro bono international aid work	185	26.9
Other	169	24.5
Pro bono domestic clinical work	107	15.5
Pro bono domestic aid work	48	7.0

Exclusions: Fellows not currently living in Australia or New Zealand.
Note: those participating in multiple areas may be counted more than once.

Appendix A4.3: Types of RACS roles Fellows participate in

N=395	N	%
Educational instructor/ presenter	174	44.1
Surgical mortality audit assessor	161	40.8
Examiner /interviewer	149	37.7
Council/ board/ committee member	149	37.7
Other	51	12.9
International aid	40	10.1

Exclusions: Fellows not currently living in Australia or New Zealand.
Note: those participating in multiple areas may be counted more than once

Chapter 5 Supplementary data

Appendix A5.1: Percentage of Fellows involved in SET training or supervision by surgical specialty

	SET training/ supervision	N	%
CAR	50	69	72.5
GEN	459	632	72.6
NEU	60	84	71.4
ORT	233	365	63.8
OTO	134	180	74.4
PAE	39	46	84.8
PLA	81	121	66.9
URO	91	115	79.1
VAS	60	78	76.9
Total	1207	1690	71.4

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows.

Appendix A5.2: Mean hours per week Fellows spent on SET training or supervision

	Public Sector			Private Sector		
	N	Mean	SD	N	Mean	SD
SET training or supervision	1136	9.7	9.4	278	4.6	5.1

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.
Note: includes administration and SET educational programs

Chapter 6 Supplementary data

Appendix A6.1: Workplace sources of Fellows' self-rated stress levels

	N	No stress	Little stress	Moderate stress	High stress	Extreme stress
Administrative regulation	1461	197	463	447	271	83
Administrative processes	1482	216	506	483	219	58
Threat of litigation	1512	358	630	307	156	61
Bullying or discrimination	1497	841	375	138	91	52
Adopt new technologies	1471	478	712	227	49	5
Maintain knowledge base	1535	620	687	202	23	3
Maintain skills	1521	582	676	230	27	6

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows and Fellows who selected not applicable to me responses.

Appendix A6.2: Proportion of Fellows who have sought professional assistance to deal with stress or a mental health issue in the last 2 years

	N	%
Yes, I sought professional assistance	147	8.7
No, I had not sought professional assistance	606	35.9
I have not experienced any mental health issues in the last 2 years	868	51.4
I'd rather not say	23	1.4
Fellows who skipped the question	46	2.7
Total	1690	100

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.

Appendix A6.3: How Fellows monitored their general health in the last 2 years

	N	%
I did my own health check-ups	139	8.5
I visited a medical doctor for a health check up	590	35.9
I see a GP/medical doctor at regular intervals as dictated by my existing medical condition requirements	523	31.8
It has been more than 2 years since I've had a general health check-up	392	23.8
Total	1644	100.0

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.

Appendix A6.4: Distribution of leave Fellows took over the past 12 months

	N				%			
Leave	CPD/ Study	Annual	Sick	Parental	CPD/ Study	Annual	Sick	Parental
1 week	474	63	119	34	30.8	4.1	7.7	2.2
2 weeks	563	217	46	12	36.6	14.1	3.0	0.8
3 weeks	186	269	9	7	12.1	17.5	0.6	0.5
4 weeks	81	424	5	5	5.3	27.6	0.3	0.3
5 weeks	15	181	1	0	1.0	11.8	0.1	0.0
6 weeks	21	158	14	3	1.4	10.3	0.9	0.2
>6 weeks	29	141	32	28	1.9	9.2	2.1	1.8
Yes	1369	1453	226	89	89.0	94.4	14.7	5.8
No	170	86	1313	1450	11.0	5.6	85.3	94.2
Total	1539	1539	1539	1539	100	100	100	100

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.

Appendix A6.5: Duration of parental leave Fellows took over the past 12 months

		N		%	
	N	<6 weeks	≥6 weeks	<6 weeks	≥6 weeks
Female	38	10	28	26.3	73.7
Male	51	48	3	94.1	5.9
Total	89	58	31		

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.

Chapter 7 Supplementary data

Appendix A7.1: Fellows current and future work intentions over the next 10 years

	N = 1633	Mean work hours per week: Now 2018	2 years 2020	5 years 2023	10 years 2028	N
Female	<40	38.3	39.5	39.7	38.6	66
	40-49	39.8	40.9	40.5	37.5	119
	50-59	40.8	39.5	36.1	19.2	59
	60-69	41.4	35.6	17.1	4.3	21
	70-79	11.0	11.0	5.0	2.5	2
	80+	16.0	0.0	0.0	0.0	1
Male	<40	45.8	47.3	46.7	45.1	112
	40-49	47.2	61.0	45.8	41.8	339
	50-59	47.4	46.0	40.3	25.1	383
	60-69	36.9	28.6	15.7	4.0	317
	70-79	19.4	11.7	3.9	1.1	188
	80+	15.5	7.5	3.2	1.2	26

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.

Appendix A7.2: Percentage of Fellows aged less than 50 years and 50 years and over who intend to retire within the next 10 years from clinical practice and all forms of paid work

Age <50 years	Public	Private	Medico legal work	All forms of paid work
In < 10 years	52	17	8	9
Total	595	550	153	584
%	8.7	3.1	5.2	1.5

Age >=50 years	Public	Private	Medico legal work	All forms of paid work
In < 10 years	486	499	244	511
Total	692	772	394	893
%	70.2	64.6	61.9	57.2

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.

Appendix A7.3: Proportion of Fellows aged 65 years or older who intend to be engaged in paid employment for the next two years

N=355	N	%
No	91	25.6
Yes	264	74.4

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.

Appendix A7.4: Type of work Fellows aged 65 or older planned to do in the next two years

N=264	N	%
Clinical consulting practice	127	48.1
Operative practice in hospital or day surgery unit	124	47.0
Medico-legal work	108	40.9
Education and Assessment	83	31.4
Administration	64	24.2
Surgical assisting	51	19.3
Research/Academia	49	18.6
Operative practice in rooms	44	16.7
Other	30	11.4

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.

Appendix A7.5: Main reason why Fellows aged 65 years or older continue to be engaged in paid employment for the next 2 years

N=261	N	%
I am doing work that I enjoy	121	46.4
I still feel I can contribute value to the workforce	77	29.5
I want to stay mentally active	37	14.2
I have not met my minimum financial goals for retirement yet	18	6.9
Other	8	3.1

Exclusions: Fellows not currently living in Australia or New Zealand; retired Fellows; missing responses.