



NATIONAL DATA REPORT 2019

**2014 - 2018 DATA FROM
FINAL YEAR STUDENTS AT
AUSTRALIAN MEDICAL SCHOOLS**

MEDICAL SCHOOLS OUTCOMES DATABASE

National Data Report 2019

BACKGROUND

The Medical Schools Outcomes Database (MSOD) is an annual national data collection run by Medical Deans Australia and New Zealand (Medical Deans). The data is collected through an annual survey administered to final year medical students from all medical schools across Australia. The survey collects information on final year demographics, previous and current education, medical school experiences, rural background, career intentions and future practice preferences.

The MSOD project commenced in 2005 and has been run each year, providing a valuable, unique, national resource of comprehensive data and insights on Australian medical final year students.

The MSOD currently contains over 34,000 participants and is stored and managed by the Australian Institute of Health and Welfare (AIHW) on behalf of Medical Deans.

Medical Deans would like to express our thanks to all the final year medical students over the years who have taken time to provide this data and contributed to the development of this resource; to inform and shape the development of informed, evidence-based, and effective medical education and health workforce policy.

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EXECUTIVE SUMMARY

This report provides the findings that were captured by the 2018 Medical Schools Outcomes Database (MSOD) survey, with data presented between the 5 years from 2014 to 2018.

This survey was administered to final year students in medical schools across Australia in the latter part of 2018, and received a 58 per cent response rate (2,228 respondents). Demographic characteristics remained broadly similar in the years to 2018. Around 53 per cent of respondents were female and the median age was 25 years, with 86 per cent under 30 years old. Around 5 per cent had 1 or more children and 2.4 per cent had other dependents, which has been consistent over the years of the report.

Selecting students from, and training in and for rural practice is a key priority for medical schools to support the improved geographic distribution of the future medical workforce. Consistent with last year, nearly 36 per cent of respondents indicated a preference to practice outside a capital city in their future career. This is more than the general population living outside capital cities in Australia. 22 per cent of respondents considered themselves as coming from a rural background and nearly 24 per cent indicated their final year of schooling was outside a capital city. The data confirms other findings that students from a rural background express higher levels of desire to practice in rural or regional locations. The MSOD also shows that there is a higher interest in Indigenous health being a part of their future medical career. This year's data again confirmed the strong association between rural club membership and a stated preference for future rural practice.

Preferences for future practice across the disciplines have remained consistent over the years of the survey. The category of "Adult medicine/internal medicine/physician" has retained the highest preference since 2014. Surgery and general practice have consistently been either the #2 or #3 choice, and paediatrics and child health, anaesthesia, and emergency medicine have remained the subsequent 3 choices comprising the top 6.

"Atmosphere/work culture typical of the discipline" remained the most highly ranked factor in influencing the preferred choice of discipline. Alignment with personal values and the experience of the specialty as a student have also been consistently highly rated as factors. Along with the "intellectual content of the discipline", these four factors have been the highest rated in each survey since 2014.

Levels of satisfaction with the medical program at universities remains high, with around three-quarters of responding final year students indicating they agreed or strongly agreed that they were satisfied with their courses. Whilst the average and median satisfaction remain unchanged, there has been a small increase of those dissatisfied or very dissatisfied. A similarly high proportion (73 per cent) of final year students were in overall agreement that their basic medical degree was preparing them well for work as an intern, with a small increase in the proportion not agreeing.

SECTION 1: DEMOGRAPHICS

Student age

In 2018, final year students who responded to the survey were most commonly aged between 25 and 29, with over 48.5 per cent within this category. 86.1 per cent were aged under 30 years old, with only 1.6 per cent over 40 years old, similar to previous years.

Table 1. Respondents by age group

Age	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
<25	1,002	40.5	807	40.4	794	35.1	799	37.3	836	37.6
25-29	1,114	45.0	905	45.3	1,084	48.0	1,014	47.3	1,079	48.5
30-34	242	9.8	194	9.7	278	12.3	225	10.5	218	9.8
35-39	71	2.9	60	3.0	60	2.7	79	3.7	58	2.6
40-44	26	1.1	17	0.9	28	1.2	17	0.8	22	1.0
45+	18	0.7	17	0.9	15	0.7	10	0.5	13	0.6
Total	2,473	100.0	2,000	100.0	2,259	100.0	2,144	100.0	2,226	100.0

The median age of respondents remained a consistent 25 years old (Table 2). The 2018 cohort had the eldest minimum age (21) in this data range, and the eldest maximum age (62) since 2014.

Table 2. Median age of respondents

Age	2014	2015	2016	2017	2018
Median	25	25	25	25	25
Minimum	18	20	20	19	21
Maximum	63	60	55	54	62

Relationship and dependants

Whilst there has been a slight decrease (1.2 per cent) this year in the number of respondents identifying as having a partner (i.e. in a relationship or married), in general the proportion has remained consistent across the previous 5 years. The data shows the figure varies by between 1 and 2 per cent across this timeframe, with just under half final year students identifying as “partnered”.

Table 3. Partner status

Marital status	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Partnered	1,199	48.3	982	48.9	1,078	47.6	1,033	48.1	1,045	46.9
Not partnered	1,281	51.7	1,025	51.1	1,185	52.4	1,114	51.9	1,183	53.1
Total	2,480	100.0	2,007	100.0	2,263	100.0	2,147	100.0	2,228	100.0

Just over 5 per cent of respondents have dependent children (Table 4), with the numbers reflective of previous years’ data. Similarly, the vast majority have no “other dependants”, with very little change over the years.

Table 4. Number of dependent children and other dependants

Dependent children & other dependants	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Children										
0	2,273	92.0	1,874	95.6	2,109	95.2	2,021	95.6	2,113	94.8
1	125	5.1	39	2.0	52	2.3	42	2.0	55	2.5
2	42	1.7	32	1.6	30	1.4	37	1.8	45	2.0
3 or more	31	1.3	16	0.8	25	1.1	13	0.6	15	0.7
Total	2,471	100.0	1,961	100.0	2,216	100.0	2,113	100.0	2,228	100.0
Other dependants										
0	2,327	94.2	1,880	95.9	2,161	97.5	2,070	98.0	2,175	97.6
1	126	5.1	62	3.2	41	1.9	33	1.6	33	1.5
2	12	0.5	13	0.7	6	0.3	6	0.3	12	0.5
3 or more	6	0.2	6	0.3	8	0.4	4	0.2	8	0.4
Total	2,471	100.0	1,961	100.0	2,216	100.0	2,113	100.0	2,228	100.0

Country of birth

Almost 66 per cent of respondents in 2018 were born in Australia, the highest percentage across the last 5 years. Singapore, Malaysia and Canada have consistently remained 3 of the countries with the highest representations in the cohort. Students born in Malaysia had a fall in representation after 2014, however recorded a slight increase in 2018. China has seen consistent representation over the last few years, apart from a slight drop in 2016.

Table 5. Country of birth (top 10)

Birth Country	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Australia	1,538	62.9	1,283	63.9	1,377	60.8	1,380	64.3	1,465	65.8
Singapore	98	4.0	80	4.0	111	4.9	92	4.3	104	4.7
Malaysia	126	5.2	69	3.4	62	2.7	57	2.7	74	3.3
China (excludes SARs and Taiwan)	61	2.5	52	2.6	41	1.8	51	2.4	59	2.6
Canada	65	2.7	89	4.4	88	3.9	80	3.7	54	2.4
India	67	2.7	37	1.8	59	2.6	51	2.4	52	2.3
United States of America	33	1.3	32	1.6	108	4.8	68	3.2	51	2.3
New Zealand	62	2.5	57	2.8	55	2.4	48	2.2	43	1.9
England	43	1.8	49	2.4	45	2.0	51	2.4	37	1.7
Hong Kong (SAR of China)	30	1.2	29	1.4	33	1.5	27	1.3	33	1.5
Other	313	12.8	233	11.6	288	12.7	241	11.2	256	11.5
Total	2,446	100.0	2,007	100.0	2,263	100.0	2,147	100.0	2,228	100.0

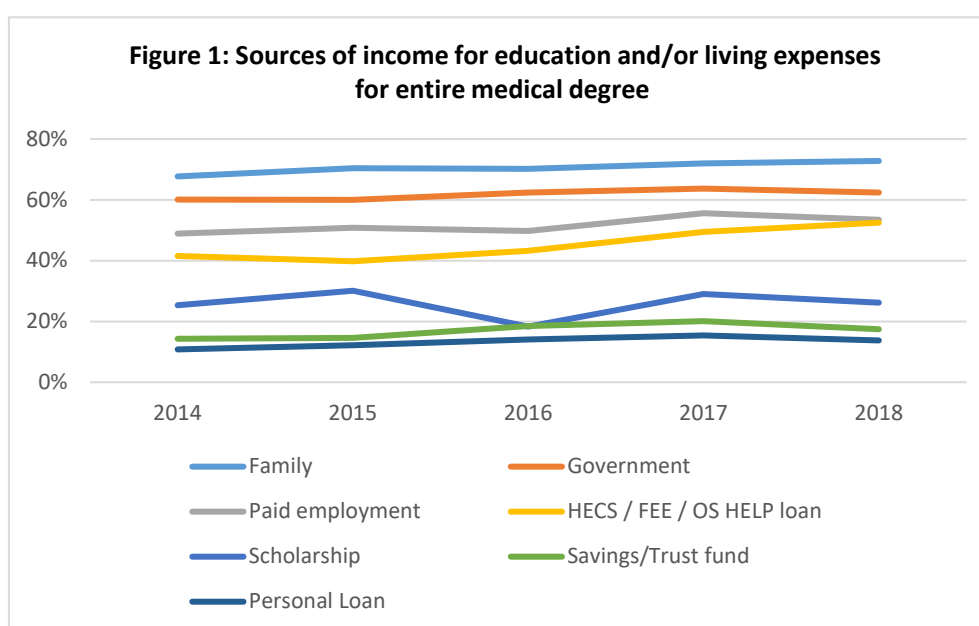
Note: The increase in numbers of people born overseas from 2016 is impacted by the fact that 2016 was the first year that substantial numbers graduated from the Ochsner campus of the University of Queensland, which is located in the United States.

Sources of income

Final year medical students were asked to indicate sources of financial support for their medical school education and/or living expenses throughout the duration of their degree (Table 6). Similar to previous years, a majority of respondents in 2018 relied on family (73 per cent) – this number has been gradually increasing over the years. Government support (62 per cent) has remained relatively stable. The number of students who declared they have student loans has continued to increase and is nearly 11 per cent higher in 2018 than in 2014, however the number with a personal loan dropped slightly after a period of growth. The increase seen over the last 4 years in the use of savings and trust funds did not continue, with a slight fall this year.

Table 6. Sources of income for education and/or living expenses for entire medical degree

Income sources	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Family	1,688	67.7	1,412	70.4	1,588	70.2	1,546	72.0	1,624	72.8
Government	1,499	60.1	1,205	60.0	1,412	62.4	1,367	63.7	1,391	62.4
Paid employment	1,219	48.9	1,019	50.8	1,117	49.4	1,194	55.6	1,190	53.4
HECS / FEE / OS HELP loan	1,036	41.6	799	39.8	978	43.2	1,062	49.5	1,171	52.5
Scholarship	631	25.3	605	30.1	640	28.3	623	29.0	585	26.2
Savings/Trust fund	357	14.3	293	14.6	418	18.5	432	20.1	389	17.4
Personal Loan	270	10.8	245	12.2	320	14.1	330	15.4	306	13.7



Rural background

22 per cent of the 2018 MSOD respondents considered themselves as coming from a rural background (Table 7), and nearly 24 per cent who finished their final year of secondary schooling in Australia did so in a regional area (Table 8). For both these indicators, the numbers have grown in the last 5 years, but remain fairly consistent from 2015 onwards.

Table 7. Respondent considers themselves to come from a rural background

Rural Background	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Yes	474	19.5	467	23.3	539	23.9	508	23.7	494	22.2
No	1,961	80.5	1,538	76.7	1,719	76.1	1,638	76.3	1,734	77.8
Total	2,435	100.0	2,005	100.0	2,258	100.0	2,146	100.0	2,228	100.0

Note: Includes all respondents, including international students

Table 8. Final year of secondary schooling in a regional area

Final year of school regional	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Yes	372	20.0	413	23.4	494	22.2	481	24.4	447	23.5
No	1,484	80.0	1,355	76.6	1,734	77.8	1,491	75.6	1,455	76.5
Total	1,856	100.0	1,768	100.0	2,228	100.0	1,972	100.0	1,902	100.0

Note: Excludes students whose final year of schooling was overseas

The MSOD survey asks participants about the type of location they have lived in the longest if they had lived in Australia for more than 1 year prior to commencing medical school. Table 9 shows that 71 per cent of final year students in 2018 lived the longest in a capital city. The data reflects fairly closely that from the Australian Bureau of Statistics which shows that slightly less than 33 per cent of Australians are currently living outside of a capital city¹.

Table 9. Location where students have lived the longest (for domestic students living in Australia for more than 1 year)

Location of longest residence ²	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Capital city	1,847	75.8	1,372	69.0	1,595	71.4	1,507	70.6	1,569	70.8
Major urban centre	194	8.0	231	11.6	203	9.1	226	10.6	223	10.1
Regional city or large town	161	6.6	154	7.7	194	8.7	163	7.6	178	8.0
Smaller town	107	4.4	84	4.2	119	5.3	113	5.3	114	5.1
Small community	128	5.3	148	7.4	122	5.5	125	5.9	132	6.0
Total	2,437	100.0	1,989	100.0	2,233	100.0	2,134	100.0	2,216	100.0

1. Australian Bureau of Statistics 2016, 'National census', viewed 3/06/2019, <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0-2016-Main%20Features-Snapshot%20of%20Australia,%202016-2>

2. Classification: Major urban centre – (>100,000 population size) e.g. Cairns, Geelong, Gold Coast–Tweed Heads, Gosford, Newcastle, Townsville, Wollongong, Wyong; Regional city or large town (25,000 - 99,999 population size) e.g. Alice Springs, Ballarat, Bunbury, Dubbo, Launceston, Mount Gambier; Smaller town (10,000 – 24,999 population size); Small community (<10,000 population size)

SECTION 2: PREVIOUS EDUCATION

Level of previous degree

The numbers of final year students who have completed a degree, diploma or certificate prior to undertaking their medical studies has been relatively stable over this period.

Table 10. Highest level of previous degree

Highest level of previous degree	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Postgraduate degree	146	10.1	107	8.8	144	9.5	138	9.6	158	10.5
Graduate diploma or graduate certificate	48	3.3	38	3.1	56	3.7	53	3.7	57	3.8
Bachelor degree (honours)	372	25.7	275	22.7	322	21.3	299	20.8	319	21.3
Bachelor degree	843	58.3	748	61.7	942	62.3	880	61.2	913	60.9
Diploma	13	0.9	24	2.0	18	1.2	26	1.8	24	1.6
Certificate	24	1.7	21	1.7	31	2.0	43	3.0	29	1.9
Total	1,446	100.0	1,213	100.0	1,513	100.0	1,439	100.0	1,500	100

Discipline of previous degree

Just over half of all respondents who had completed a previous degree had done so in Natural and Physical Sciences, whilst nearly 40 per cent had completed a degree in a health-related discipline. Medical studies (17 per cent), Pharmacy (4 per cent) and Rehabilitation Therapies (4 per cent) were the most common health-specific degrees completed.

Table 11. Discipline of highest previous degree

Discipline of highest previous degree	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Natural and Physical Sciences	680	48.2	568	47.7	690	46.4	700	49.7	771	52.2
Health Total*	558	39.5	485	40.8	588	39.5	567	40.2	581	39.3
-- Medical studies	218	15.4	169	14.2	240	16.1	246	17.5	244	16.5
-- Complementary Therapies	4	0.3	5	0.4	8	0.5	6	0.4	0	..
-- Dental Studies	9	0.6	13	1.1	9	0.6	4	0.3	13	0.8
-- Nursing / Midwifery	28	2.0	31	2.6	46	3.1	33	2.3	38	2.5
-- Optical Science	13	0.9	4	0.3	1	0.1	9	0.6	6	0.4
-- Pharmacy	84	5.9	68	5.7	75	5.0	62	4.4	66	4.4
-- Rehabilitation Therapies	88	6.2	63	5.3	72	4.8	60	4.3	58	3.9
-- Radiography	16	1.1	20	1.7	12	0.8	17	1.2	20	1.3
-- Public Health	23	1.6	31	2.6	39	2.6	46	3.3	37	2.5
-- Veterinary Studies	10	0.7	9	0.8	4	0.3	7	0.5	10	0.6
-- Other Health	57	4.0	54	4.5	66	4.4	62	4.4	65	4.4
Society and Culture	131	9.3	88	7.4	119	8.0	118	8.4	113	7.6
Management and Commerce	59	4.2	37	3.1	65	4.4	70	5.0	48	3.2
Engineering and Related Technologies	67	4.7	46	3.9	60	4.0	44	3.1	36	2.4
Creative Arts	39	2.8	33	2.8	48	3.2	41	2.9	35	2.3
Education	21	1.5	10	0.8	21	1.4	19	1.3	17	1.1
Mixed Field Programmes	10	0.7	18	1.5	21	1.4	14	1.0	17	1.1
Information Technology	19	1.3	12	1.0	18	1.2	13	0.9	9	0.6
Agriculture, Environmental and Related Studies	5	0.4	8	0.7	10	0.7	6	0.4	8	0.5
Food, Hospitality and Personal Services	3	0.2	4	0.3	5	0.3	6	0.4	7	0.4
Architecture and Building	7	0.5	3	0.3	2	0.1	2	0.1	2	0.1

Note: Due to the structure of the question, the 'Health Total' figure includes those who selected a row titled 'Health, please specify' and did not specify an area, as well as those who specified at least one health area.

SECTION 3: MEDICAL SCHOOL EXPERIENCE

Satisfaction and preparation for internship

Final year students were asked about their level of satisfaction with the medical program at their university (Table 12) on a Likert scale of 1 to 5. Three-quarters of respondents indicated they were “satisfied” or “very satisfied” with their medical program in 2018. Whilst this is the second most satisfied final year cohort since 2014, the figure is down slightly from last year. The proportion of respondents “dissatisfied” or “highly dissatisfied” has risen slightly since last year. The average level of satisfaction for the 2018 cohort remained at 3.8 and the median level of satisfaction was also unchanged at 4 (satisfied).

Table 12. Overall level of satisfaction with medical program at the university

Level of satisfaction	2014	2015	2016	2017	2018
Average satisfaction	3.9	3.8	3.8	3.8	3.8
Median satisfaction	4	4	4	4	4
Per cent satisfied or very satisfied	81.0	74.2	74.9	76.4	75.4
Per cent dissatisfied or very dissatisfied	6.5	9.4	9.5	10.0	10.9

Scale: 1 = Very Dissatisfied, 2 = Dissatisfied, 3 = Neither Satisfied nor Dissatisfied, 4 = Satisfied, 5 = Very Satisfied

73 per cent of respondents in 2018 “Agreed” or “Strongly Agreed” that their basic medical degree was preparing them well to work as an intern, a small drop from last year. 8 per cent of the cohort said they “Disagreed” or “Strongly Disagreed” with this statement (Table 13), a figure that has been rising over the reported period. The average and median levels of agreement has remained consistent.

Table 13. Overall level of agreement with the statement 'My Basic Medical Degree is preparing me well to work as an intern.'

Level of agreement	2014	2015	2016	2017	2018
Average agreement	3.9	3.9	3.9	3.8	3.8
Median agreement	4	4	4	4	4
Per cent agreeing or strongly agreeing	78.6	74.2	74.8	74.4	72.8
Per cent disagreeing or strongly disagreeing	4.3	6.2	6.5	7.1	8.2

Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Rural club membership

As part of the medical school experience, students have the opportunity to join rural clubs; student-led groups and networks that promote and develop initiatives surrounding rural and remote health practice. Membership of a rural club has been shown to be strongly associated with a desire for future practice in a rural location, and in 2018, 33 per cent of respondents indicated that they were a member of a rural club – a decrease in comparison to the previous 3 years, however still marginally above the rate reported in 2014.

It is worth noting that the majority (60 per cent) of rural club members are not from rural backgrounds. However, of those students who did consider themselves from a rural background, only 41 per cent were not involved with rural clubs.

Using a binary logistic regression analysis, 2018 data showed that respondents who reported being members of rural clubs were 3.9 times more likely to express a preference to practice outside capital cities than those who were not members (OR 3.9 95%CI 3.2-4.6 p<0.001).

Table 14. Respondent is a member of a rural club

Rural club membership	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Yes	784	31.6	814	40.8	884	39.3	825	38.4	724	32.5
No	1,699	68.4	1,183	59.2	1,367	60.7	1,322	61.6	1,504	67.5
Total	2,483	100.0	1,997	100.0	2,251	100.0	2,147	100.0	2,228	100.0

SECTION 4: CAREER INTENTION

Preferred country for future practice

95 per cent of 2018 final year students indicated Australia as their preferred country for future practice. This has remained fairly stable, with 2016 having the lowest percentage in this reporting period. The numbers indicate the preference to work in New Zealand remains below 1 per cent.

Table 15. Preferred country for future practice

Preferred country for future practice	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Australia	2,326	95.3	1,910	95.2	2,073	91.6	2,016	93.9	2,115	94.9
New Zealand	17	0.7	7	0.3	13	0.6	15	0.7	14	0.6
Other	97	4.0	90	4.5	177	7.8	116	5.4	99	4.4
Total	2,440	100.0	2,007	100.0	2,263	100.0	2,147	100.0	2,228	100.0

Note: The 2016 increase in students indicating their preference to practice in countries other than Australia or New Zealand is likely to have been impacted by that year being the first that substantial numbers graduated from the US Ochsner campus of the University of Queensland.

Preferred state for future practice

In 2018, Victoria, New South Wales and Queensland remain the 3 most preferred states for final year students when considering the location of their intended future practice.

Considering the data in Table 27 (Respondents by state/territory), it is noted that Queensland, Tasmania have more final year students currently studying there than respondents who intend to practice in those states.

Table 16. Career intention: first preference of state for future practice

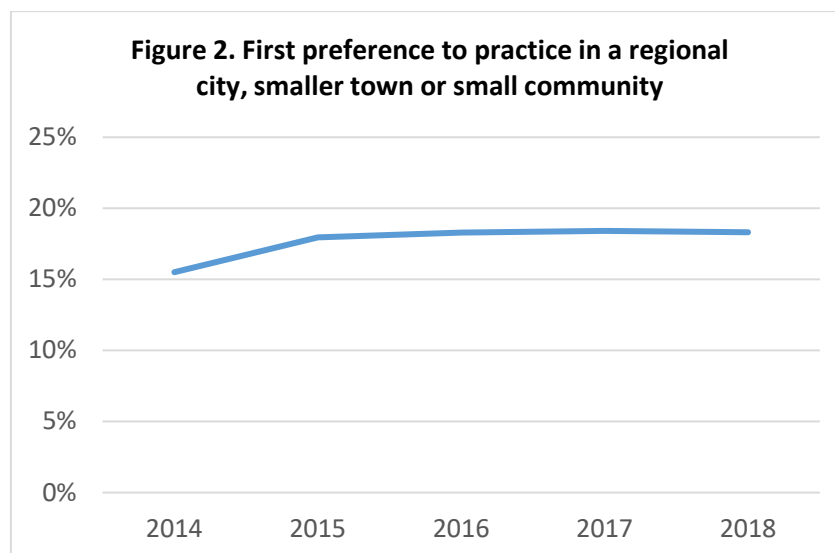
First preference state for future practice	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
VIC	537	22.0	549	27.4	589	26.0	607	28.3	682	30.6
NSW	826	33.9	546	27.2	621	27.4	591	27.5	586	26.3
QLD	481	19.7	505	25.2	481	21.3	460	21.4	438	19.7
SA	162	6.6	79	3.9	112	4.9	101	4.7	92	4.1
WA	187	7.7	137	6.8	136	6.0	127	5.9	183	8.2
TAS	53	2.2	40	2.0	57	2.5	68	3.2	66	3.0
NT	29	1.2	24	1.2	22	1.0	29	1.4	24	1.1
ACT	51	2.1	30	1.5	55	2.4	33	1.5	44	2.0
Country other than Australia	114	4.7	97	4.8	190	8.4	131	6.1	113	5.1
Total	2,440	100.0	2,007	100.0	2,263	100.0	2,147	100.0	2,228	100.0

Preferred location for future practice

The percentage of final year students expressing a preference for future practice located outside of capital cities has had an overall increase since 2014 (Table 17), with nearly 36 per cent of respondents in 2018 indicating this; a greater proportion (33 per cent) than the population reported to be living outside of capital cities³. Whilst there has been a small increase of preference for rural areas (regional cities, smaller towns, or small communities), it is worth noting that much of the change has been to preference major urban centres.

Table 17. Career intention: first preference of location for future practice (for students preferring to practice in Australia)

First preference region for future practice	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Capital city	1,693	69.9	1,240	63.3	1,408	65.1	1,342	64.2	1,395	64.2
Major urban centre	352	14.5	367	18.7	361	16.7	365	17.5	380	17.5
Regional city or large town	266	11.0	231	11.8	266	12.3	262	12.5	280	12.9
Smaller town	78	3.2	84	4.3	97	4.5	87	4.2	89	4.1
Small community	33	1.4	36	1.8	32	1.5	35	1.7	29	1.3
Total	2,422	100.0	1,958	100.0	2,164	100.0	2,091	100.0	2,173	100.0



3. Australian Bureau of Statistics 2016, 'National', viewed 3/6/2019, <http://www.ab/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0~2016~Main%20Features~Snapshot%20of%20Australia,%202016~2>

Preferred location for future practice – by rural background

The 2018 data shows a slight increase from last year of students coming from a rural background expressing a preference for future practice outside capital cities or major urban centres, from 43 per cent to 47 per cent. The largest increase is the preference for regional cities or towns, with the preference for smaller towns declining somewhat.

The preferred location for future practice of students from a non-rural background remained fairly stable. It is worth noting that just over a quarter of non-rural students state a preference for a future career working outside a capital city.

Table 18. Preferred location for future practice – by rural background (percentage)

Preferred location of future practice (percentage)	2014		2015		2016		2017		2018	
	Non-rural	Rural	Non-rural	Rural	Non-rural	Rural	Non-rural	Rural	Non-rural	Rural
Capital city	79.0	33.2	72.2	34.3	75.4	32.7	73.5	34.7	73.8	31.3
Major urban centre	12.6	22.0	17.0	24.3	15.4	20.7	16.0	21.8	16.4	21.3
Regional city or town	6.2	30.0	7.0	27.4	6.5	30.4	8.0	27.1	7.3	32.1
Smaller town	1.6	10.1	2.7	9.6	2.0	12.4	1.7	11.9	2.3	10.4
Small community	0.5	4.7	1.1	4.3	0.7	3.8	0.8	4.4	0.3	4.9

Figure 3: Preferred location for future practice: students from a rural background

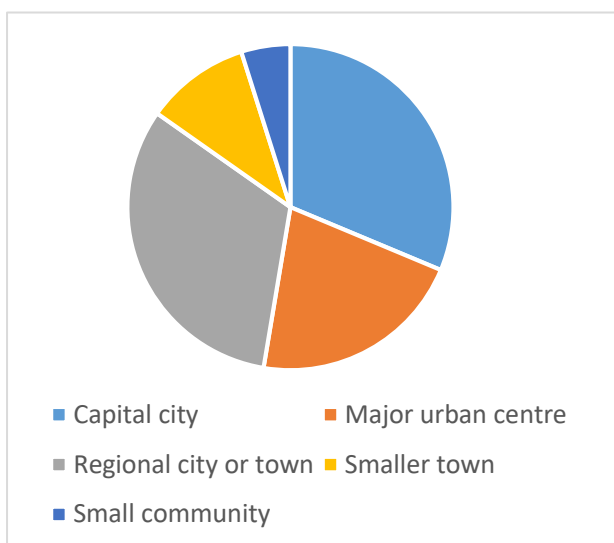
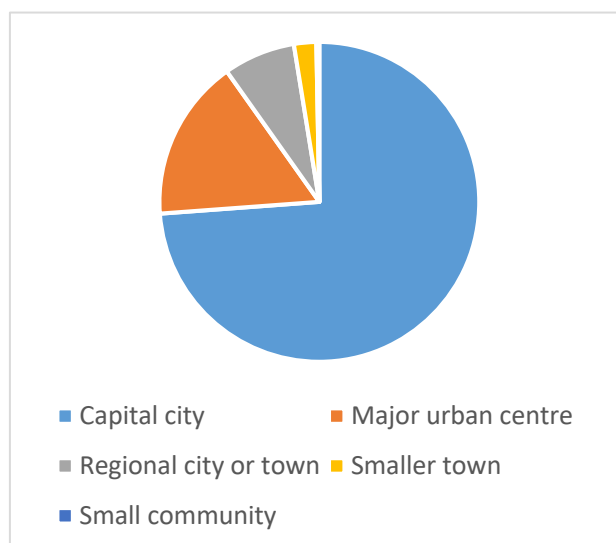


Figure 4: Preferred location for future practice: students from a non-rural background



Interests for future practice – teaching

A substantial majority of final year medical students were interested in teaching as part of their future medical career (Table 19), with this number remaining at around 85 per cent. A very low proportion of respondents indicate they are not interested in teaching, whilst consistently 11 to 12 per cent are undecided.

Table 19. Interest in teaching as part of medical career

Interest in teaching	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Yes	2,112	85.1	1,672	83.6	1,917	85.1	1,838	85.6	1,902	85.4
No	67	2.7	72	3.6	69	3.1	68	3.2	80	3.6
Undecided	304	12.2	256	12.8	266	11.8	241	11.2	246	11.0
Total	2,483	100.0	2,000	100.0	2,252	100.0	2,147	100.0	2,228	100.0

Interests for future practice – research

Approximately two-thirds of respondents in 2018 were interested in research as part of their future medical career. Whilst this is the highest amount recorded (Table 20), these numbers have remained fairly stable over the time period.

Table 20. Interest in research as part of medical career

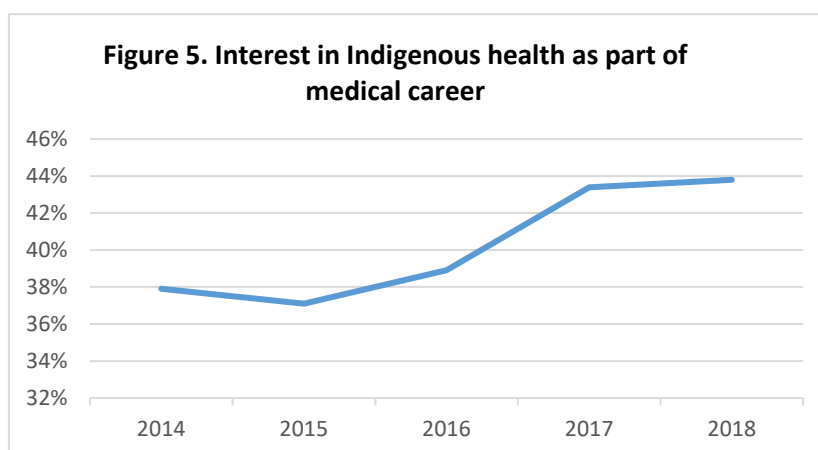
Interest in research	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Yes	1,585	64.0	1,229	61.5	1,401	62.2	1,343	62.6	1,431	64.2
No	320	12.9	305	15.3	340	15.1	295	13.7	348	15.6
Undecided	571	23.1	466	23.3	511	22.7	509	23.7	449	20.2
Total	2,476	100.0	2,000	100.0	2,252	100.0	2,147	100.0	2,228	100.0

Interests for future practice – Indigenous health

Nearly 44 per cent of final year students in 2018 were interested in Indigenous health being a part of their future career (Table 21). This is the highest percentage across the reported timeframe, with an increase of almost 6 per cent since 2014.

Table 21. Interest in Indigenous health as part of medical career

Interest in Indigenous health	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Yes	936	37.9	741	37.1	875	38.9	931	43.4	976	43.8
No	574	23.3	472	23.6	584	25.9	473	22.0	508	22.8
Undecided	957	38.8	787	39.4	793	35.2	743	34.6	744	33.4
Total	2,467	100.0	2,000	100.0	2,252	100.0	2,147	100.0	2,228	100.0



Respondents from a rural background were more likely to express interest in Indigenous health than those from a non-rural background. This has been a consistent trend across the previous years.

Table 22. Interest in Indigenous health by rural background (percentage)

Interest in Indigenous health (percentage)	2014		2015		2016		2017		2018	
	Rural	Non-Rural	Rural	Non-Rural	Rural	Non-Rural	Rural	Non-Rural	Rural	Non-Rural
Yes	54.0	33.9	50.5	33.0	51.7	34.7	50.7	41.1	57.3	40.0
No	10.8	26.2	18.9	25.0	21.4	27.4	17.6	23.3	14.8	25.1
Undecided	35.3	39.9	30.5	42.0	27.0	37.9	31.7	35.6	27.9	34.9

Preferred specialty of future practice

“Adult Medicine/ Internal Medicine/ Physician” has been the most preferred specialty of future practice for final year students since 2014, with a slight increase this year to 19 per cent (Table 23). General Practice (15.5 per cent) and Surgery (15.4 per cent) were respectively the second and third ranked specialty. These 3 disciplines have remained as the most commonly preferred specialties of future practice since 2014; with Paediatrics and Child Health, Anaesthesia, and Emergency Medicine being consistently the other 3 to comprise the top 6. In the last 3 years, the same 13 of the 24 listed specialties have comprised the top 13 preferences.

The percentage of those preferring to practice in Anaesthesia has had the largest increase over the previous 5 years, from 7.5 per cent in 2014 to 9 per cent in 2018. Of all the specialties, Occupational and Environmental Medicine has had the lowest numbers of respondents selecting this as a preferred area of future practice across the previous 5 years.

It is worth noting that a small but consistent number of final year students state a preference for a career in Non-Specialist Hospital Practice.

Table 23. First preference of specialty for future practice

First preference of specialty for future practice	2014			2015			2016		
	Number	Per cent	Rank (in year)	Number	Per cent	Rank (in year)	Number	Per cent	Rank (in year)
Adult Medicine/ Internal Medicine/ Physician	474	19.5	1	391	19.8	1	428	19.3	1
Surgery	393	16.2	2	303	15.3	3	342	15.4	3
General Practice	392	16.1	3	351	17.8	2	356	16.0	2
Paediatrics and Child Health	249	10.2	4	189	9.6	4	219	9.9	5
Anaesthesia	183	7.5	6	160	8.1	6	221	10.0	4
Emergency Medicine	185	7.6	5	168	8.5	5	206	9.3	6
Obstetrics and Gynaecology	181	7.4	7	122	6.2	7	148	6.7	7
Psychiatry	74	3.0	8	74	3.7	8	74	3.3	8
Intensive Care Medicine	64	2.6	10	39	2.0	10	53	2.4	9
Ophthalmology	69	2.8	9	29	1.5	11	41	1.8	10
Radiology	54	2.2	11	53	2.7	9	39	1.8	11
Dermatology	42	1.7	12	22	1.1	12	24	1.1	12
Palliative Medicine	6	0.2	16	11	0.6	15	13	0.6	13
Pathology	18	0.7	13	17	0.9	13	11	0.5	15
Sport and Exercise Medicine	9	0.4	15	11	0.6	16	10	0.5	16
Radiation Oncology	12	0.5	14	5	0.3	19	2	0.1	21
Sexual Health Medicine	4	0.2	20	8	0.4	17	2	0.1	22
Public Health Medicine	6	0.2	17	12	0.6	14	7	0.3	17
Non-Specialist Hospital Practice (e.g. career as a medical officer in a hospital)	4	0.2	18	6	0.3	18	11	0.5	14
Rehabilitation Medicine	4	0.2	19	2	0.1	21	6	0.3	18
Medical Administration (e.g. managing a hospital)	2	0.1	22	2	0.1	20	2	0.1	20
Pain Medicine	2	0.1	23	0	0.0	24	1	0.0	24
Addiction Medicine	3	0.1	21	1	0.1	22	2	0.1	19
Occupational and Environmental Medicine	1	0.0	24	0	0.0	23	1	0.0	23
Total	2,431	100.0		1,976	100.0		2,219	100.0	

First preference of specialty for future practice	2017			2018		
	Number	Per cent	Rank (in year)	Number	Per cent	Rank (in year)
Adult Medicine/ Internal Medicine/ Physician	390	18.5	1	419	19.1	1
Surgery	317	15.0	3	341	15.5	2
General Practice	349	16.5	2	338	15.4	3
Paediatrics and Child Health	189	9.0	5	205	9.3	4
Anaesthesia	226	10.7	4	198	9.0	5
Emergency Medicine	181	8.6	6	176	8.0	6
Obstetrics and Gynaecology	138	6.5	7	156	7.1	7
Psychiatry	84	4.0	8	98	4.5	8
Intensive Care Medicine	54	2.6	9	71	3.2	9
Ophthalmology	45	2.1	10	49	2.2	10
Radiology	43	2.0	11	36	1.6	11
Dermatology	25	1.2	12	22	1.0	12
Palliative Medicine	11	0.5	13	16	0.7	13
Pathology	9	0.4	16	11	0.5	14
Sport and Exercise Medicine	11	0.5	14	11	0.5	15
Radiation Oncology	6	0.3	18	10	0.5	16
Sexual Health Medicine	3	0.1	22	9	0.4	17
Public Health Medicine	9	0.4	17	8	0.4	18
Non-Specialist Hospital Practice (e.g. career as a medical officer in a hospital)	9	0.4	15	7	0.3	19
Rehabilitation Medicine	3	0.1	21	5	0.2	20
Medical Administration (e.g. managing a hospital)	3	0.1	20	3	0.1	21
Pain Medicine	2	0.1	23	2	0.1	22
Addiction Medicine	4	0.2	19	1	0.0	23
Occupational and Environmental Medicine	0	0.0	24	1	0.0	24
Total	2,111	100.0		2,193	100.0	

Factors influencing specialty choice for future practice

Table 24 shows the score and rank of various factors stated by the respondents' as influencing their choice of most preferred specialty of medicine. The final year medical students were asked to rank each factor from a scale of 1 – "Not at all" influential, to 5 – "A great deal" of influence.

The consistently highest ranked influencing factor across the previous 5 years was that of "Atmosphere/ work culture", and continues to score very highly in 2018 (4.12). The factor "Alignment with personal values" has become more influential since 2014, where it ranked 4th, to ranking 2nd in 2018 at 4.11; this is increasing year on year and is set to become the most influential factor if it continues to grow.

The least influential factors were "financial costs of vocational training" (1.87), "Influence of partners' occupation" (1.86) and "financial costs of medical school education and/or debt" (1.86). Across the previous 5 years, these factors have consistently ranked the lowest.

Table 24. Factors influencing choice of most preferred area of medicine

Mean of factors influencing choice of most preferred area of medicine	2014		2015		2016		2017		2018	
	Influence	Rank (in year)	Influence	Rank (in year)	Influence	Rank (in year)	Influence	Rank (in year)	Influence	Rank (in year)
Atmosphere/work culture typical of the discipline	4.05	1	4.12	1	4.09	1	4.14	1	4.12	1
Alignment with personal values	3.93	4	4.01	3	4.04	3	4.09	2	4.11	2
Experience of specialty as a medical student	4.01	2	4.04	2	4.05	2	4.07	3	4.09	3
Intellectual content of the specialty	3.96	3	3.99	4	3.98	4	4.00	4	4.02	4
General medical school experiences (e.g. mentors, discipline placements)	3.88	6	3.95	5	3.96	5	3.95	5	3.97	5
Influence of consultants/mentors	3.88	5	3.91	6	3.93	6	3.90	6	3.92	6
Self-appraisal of own skills/aptitudes	3.69	8	3.78	7	3.80	7	3.76	7	3.81	7
Opportunity for procedural work	3.70	7	3.69	8	3.69	8	3.71	8	3.70	8
Perceived opportunity to work flexible hours	3.47	9	3.46	9	3.43	10	3.46	10	3.48	9
Type of patients typical of the discipline	3.43	10	3.45	10	3.49	9	3.48	9	3.47	10
Perceived amount of working hours	3.34	11	3.29	14	3.27	13	3.34	11	3.37	11
Perceived job security	3.34	12	3.39	11	3.32	11	3.30	12	3.36	12
Perceived career advancement prospects	3.34	13	3.34	12	3.28	12	3.29	13	3.35	13
Availability of a vocational training placement	3.28	14	3.33	13	3.19	14	3.20	14	3.25	14
Self-appraisal of own domestic circumstances	3.20	15	3.25	15	3.18	15	3.19	15	3.23	15
Opportunity for research and /or teaching	3.16	16	3.04	16	3.02	16	3.00	16	3.05	16
Geographical location of most preferred specialty	3.04	17	3.02	17	2.96	17	2.99	17	2.97	17
Number of years required to complete training	2.96	18	2.93	18	2.87	18	2.87	18	2.93	18
Perceived financial prospects	2.64	19	2.60	19	2.49	19	2.52	19	2.59	19
Perceived prestige of the discipline	2.36	20	2.30	20	2.25	20	2.20	20	2.24	20
Risk of litigation and associated insurance costs	2.23	21	2.10	21	2.06	21	2.02	21	2.06	21
Influence of parents/relatives	2.00	22	1.95	22	1.91	22	1.85	22	1.92	22
Financial costs of vocational training	1.92	24	1.85	25	1.82	25	1.81	24	1.87	23
Financial costs of medical school education and/or debt	1.90	25	1.85	24	1.85	23	1.82	23	1.86	24
Influence of partner's occupation	1.93	23	1.88	23	1.85	24	1.81	25	1.86	25

SECTION 5: INTERNSHIP

Accepted internships by state

The MSOD survey asks participants about their future internship. It should be noted that the time of year in which schools administer the survey would have a bearing on whether students had been offered an internship, thus the responses presented in the table below do not reflect the final number of internship positions accepted for the 2018 cohort nor are they a representative sample.

Final year students were asked to indicate in which state or territory they had accepted an internship position (Table 25). Victoria was the most common state where internship had been accepted, followed by New South Wales and Queensland. Western Australia and South Australia had dropped by approximately 4 each since 2014, however it should be reiterated that variations in medical school timing for the survey and response rates may have caused such fluctuations.

Table 25. Internship acceptance by state

Internship acceptance by state	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
VIC	461	19.8	481	25.6	519	25.0	552	28.3	619	28.8
NSW	749	32.1	498	26.5	569	27.5	521	26.7	589	27.4
QLD	502	21.5	510	27.2	506	24.4	463	23.7	467	21.7
WA	191	8.2	139	7.4	128	6.2	128	6.6	180	8.4
SA	199	8.5	94	5.0	101	4.9	105	5.4	96	4.5
TAS	66	2.8	52	2.8	65	3.1	71	3.6	76	3.5
ACT	85	3.6	41	2.2	79	3.8	30	1.5	65	3.0
NT	28	1.2	25	1.3	22	1.1	26	1.3	20	0.9
Country other than Australia	50	2.1	38	2.0	83	4.0	55	2.8	41	1.9
Total	2,331	100.0	1,878	100.0	2,072	100.0	1,951	100.0	2,153	100.0

Notes:

1. Low response rates from some states/territories in 2015 affected results, particularly NSW, Western Australia, South Australia and the ACT.
- 2 The time at which graduating students complete the survey will, to some extent have a bearing on the number that have accepted an internship.
3. The increase in numbers of people accepting internships to practice in countries other than Australia in 2016 is likely to have been impacted by the fact that 2016 was the first year substantial numbers graduated from the US-based Ochsner campus of the University of Queensland.

APPENDIX: 2018 MSOD SURVEY RESPONSE RATES

In 2018, there were 3,811 final year students across all Australian medical schools (Table 26), of which 58 per cent (or 2,228) responded to the 2018 MSOD survey.

Table 26. Number of final year students across all Australian medical schools, showing course length

Length of course	2018	
	Number	Per cent
4-year course	2,344	61.5
5-year course	828	21.7
6-year course	639	16.8
Total	3,811	100.0

Survey responses by medical school state and/or territory from the last 5 years is presented in Table 27. More than 80 per cent of respondents in 2018 were final year students from medical schools based in Victoria, New South Wales or Queensland. It should be remembered that this table refers to the location where students were studying medicine, (which may be different to where they identify their primary residence to be).

Table 27. Respondents by state/territory

Location of medical school	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
VIC	461	18.5	509	25.4	544	24.0	567	26.4	661	29.7
NSW	857	34.4	546	27.2	646	28.5	611	28.5	594	26.7
QLD	547	21.9	571	28.5	621	27.4	552	25.7	501	22.5
WA	186	7.5	135	6.7	141	6.2	134	6.2	193	8.7
TAS	108	4.3	74	3.7	81	3.6	86	4.0	99	4.4
SA	234	9.4	136	6.8	148	6.5	148	6.9	93	4.2
ACT	100	4.0	36	1.8	82	3.6	49	2.3	87	3.9
Total	2,493	100.0	2,007	100.0	2,263	100.0	2,147	100.0	2,228	100.0

Note: Data for Flinders Medical School in Darwin cannot be separately identified from the Adelaide campus and so responses are included with South Australia.

Medical school response rate

The breakdown of respondents by medical school is presented in Table 28.

Table 28. Respondents by medical school

School of completion	2014		2015		2016		2017		2018	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Australian National University	100	4.0	36	1.8	82	3.6	49	2.3	87	3.9
Bond University	61	2.4	53	2.6	46	2.0	27	1.3	56	2.5
Deakin University	10	0.4	112	5.6	105	4.6	100	4.7	118	5.3
Flinders University	94	3.8	84	4.2	97	4.3	93	4.3	13	0.6
Griffith University	112	4.5	100	5.0	29	1.3	83	3.9	92	4.1
James Cook University	48	1.9	22	1.1	56	2.5	100	4.7	69	3.1
Monash University	230	9.2	238	11.9	242	10.7	303	14.1	350	15.7
The University of Adelaide	140	5.6	52	2.6	51	2.3	55	2.6	80	3.6
The University of Melbourne	221	8.9	159	7.9	197	8.7	164	7.6	193	8.7
The University of Newcastle / University of New England	117	4.7	103	5.1	54	2.4	79	3.7	101	4.5
The University of New South Wales	193	7.7	88	4.4	126	5.6	127	5.9	131	5.9
The University of Notre Dame (Fremantle)	93	3.7	39	1.9	60	2.7	40	1.9	48	2.2
The University of Notre Dame (Sydney)	80	3.2	8	0.4	81	3.6	51	2.4	54	2.4
The University of Queensland	326	13.1	396	19.7	490	21.7	342	15.9	284	12.7
The University of Sydney	284	11.4	190	9.5	269	11.9	276	12.9	254	11.4
The University of Western Australia	93	3.7	96	4.8	81	3.6	94	4.4	145	6.5
University of Tasmania	108	4.3	74	3.7	81	3.6	86	4.0	99	4.4
University of Wollongong	73	2.9	60	3.0	73	3.2	53	2.5	31	1.4
Western Sydney University	110	4.4	97	4.8	43	1.9	25	1.2	23	1.0
Total	2,493	100.0	2,007	100.0	2,263	100.0	2,147	100.0	2,228	100.0

Note: Data on previous years may include respondents who repeated their final year.

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