

Australian Medical Workforce Advisory Committee

CAREER DECISION MAKING BY POSTGRADUATE DOCTORS

AMWAC MEDICAL CAREERS SURVEYS, 2004

SUMMARY OF FINDINGS

AMWAC Report 2005.3

December 2005

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INTRODUCTION

This document presents a detailed summary of the findings of two surveys undertaken by the Australian Medical Workforce Advisory Committee (AMWAC) in 2004. These surveys were:

1. The Wave 2 survey of doctors participating in the AMWAC longitudinal study. These doctors were first surveyed in 2002 (Wave 1 survey); and
2. A survey (snapshot) of all recent entrants to vocational training.

A copy of the full report is available at www.healthworkforce.health.nsw.gov.au.

As outlined in Table 1 these two surveys represent Stage 3 of an AMWAC project that was commenced in 2002. The purpose of the project is to provide advice to the Australian Health Ministers' Advisory Council on factors influencing the career choice and workforce participation decisions of postgraduate doctors. Of most relevance to workforce planning are the extrinsic factors influencing:

- choice of discipline;
- workforce attrition/retention;
- hours of work;
- type of medical practice; and
- location of practice (State/Territory and geographic).

Intrinsic factors (such as skills and aptitudes and personal preferences) are also of interest, but are less amenable to influence by policy makers.

The project builds on earlier AMWAC studies on female participation in the medical workforce (AMWAC Report 1996.7), and factors influencing workforce participation and changes occurring in the characteristics of Australian medical students (AMWAC/AIHW Report 1997.7). The first of these studies recommended that 'AMWAC coordinate a historical/cohort study of medical practitioners from graduation throughout their medical careers to identify factors which determine career choice and examine concerns about non-participation in the workforce'. Table 1 outlines the first three stages of the project.

Table 1: Summary of events associated with the AMWAC medical careers project

2002 Stage 1	Career decision making by doctors in the early postgraduate years - A literature review,' (AMWAC Report 2002.1)
2002 Stage 2	<u>Wave 1 survey</u> – a National survey of 7,906 doctors in vocational training in September 2002: 4,295 (54%) responded 'Career Decision Making by Doctors in Vocational Training,' (AMWAC Report 2003.1). In 2002, 4,017 survey respondents agreed to participate in a longitudinal cohort study, and in 2004, 3,946 (98.2%) of these doctors were able to be contacted.
2004 Stage 3	<u>Wave 2 survey</u> – second survey of the 2002 cohort of doctors who agreed to participate in the longitudinal study and were able to be contacted. In total 71.4% (2,817/3946) responded. This figure represented 35.6% of the original 2002 target population. The 2004 survey included doctors who: 1) had completed vocational training since September 2002; 2) were still undertaking vocational training in 2004, 3) were working or studying overseas, and 4) had left medicine altogether. <u>2004 survey of recent entrants to vocational training</u> - A survey of the 3,075 doctors who had commenced vocational training since September 2002. In total, 1,712 (57.4%) responded. This survey provided an opportunity to compare 'snapshot' information from two groups of doctors in vocational training: 2002 and 2004.

Wave 2 survey of doctors participating in the AMWAC longitudinal study

The AMWAC medical careers study represents a 'longitudinal prospective cohort panel' design. The study involves re-surveying the same cohorts of study participants each two years. Understandably, the first survey of any given cohort can only provide cross-sectional data. Subsequent surveys (known as 'Wave 2' survey etc) permit AMWAC to measure change in a variable from one period to another (e.g., change in satisfaction with choice of discipline or working conditions, change in type of medical practice, and change in plans about location of medical work). These surveys also enable AMWAC to monitor change in factors influencing these career decisions and whether doctors enact their career plans once they become qualified specialists.

2004 survey (snapshot) of recent entrants to vocational training

The 2004 postal survey of all recent entrants to vocational training was administered with the assistance of all medical colleges. The objectives of this survey were to provide an up-to-date snapshot of 1) factors influencing the career decisions of recent entrants to vocational training about choice of specialty and future plans about hours of work, type of medical work and location of medical work, and 2) the perceptions of trainees about their education, training and working environments.

A detailed description of the methodology pertaining to both surveys, including the research questions guiding the design and analysis of the surveys is provided in the full report.

Structure of summary of findings

This summary is divided into five sections:

- Part 1 presents the key findings, conclusions and recommendations arising from the two 2004 surveys.
- Part 2 analyses the response to both surveys.
- Part 3 provides an overview of the background characteristics and careers status of respondents to both surveys.
- Part 4 addresses the findings from the Wave 2 survey of doctors participating in the AMWAC longitudinal study that commenced in 2002. The reader should note that within this section there are three subsections:
 - Findings for all Wave 2 respondents;
 - Findings from respondents who by 2004 had completed vocational training;
 - Findings from respondents who, in 2004, were still in vocational training.
- Part 5 addresses the findings from the 2004 survey (snapshot) of recent entrants to vocational training.

PART 1: KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Key findings

This section provides a summary of the key findings using the following headings: 1) background characteristics, 2) career status and progression, 3) choice of discipline, 4) hours of work, 5) type of medical work, 6) location of practice, 7) training and work environment, and 8) workforce attrition/retention.

Career status and career progress

Career status

- By 2004, 35% of Wave 2 survey respondents had completed vocational training, 62.9% were in vocational training, 1.4% had left vocational training without completing the program and 0.6% had left medicine altogether (Table 7).
- In total, 6% of Wave 2 respondents were taking a break; 70% of whom were women.
- The majority (96%) of recent entrant respondents were practising in a vocational training program, 3.6% were taking a break and 0.4% had left medicine altogether (Table 7).

Career progression

- By 2004, the career progress of 67% of Wave 2 respondents was consistent with their expectations in 2002. However, of Wave 2 respondents still in vocational training in 2004, 48% (790/1653) were taking longer to complete vocational training than they had previously expected and part-time training and taking time-out were factors associated with the delay.

Choice of discipline

- In total, 83.6% of Wave 2 respondents were in seven specialties: general practice, adult medicine, surgery, anaesthesia, emergency medicine, psychiatry and paediatrics and child health (Table 8).
- The specialty profile of recent entrant respondents was different to that of Wave 2 survey respondents. For example, 31.5% of recent entrants were GPET trainees, while 17.5% of Wave 2 survey respondents were general practice trainees or qualified general practitioners (Table 8).

Stage of career when chose specialty

- Among recent entrant respondents, 58% had chosen their specialty by the end of Postgraduate Year 2 (PGY2) and a further 19% by the end of PGY 3. Comparative figures from the 2002 survey were 59.3% and 19.8% respectively.

Factors influencing choice of specialty

- In total, 78.1% of recent entrant respondents rated 'appraisal of own skills and aptitudes' as influential in their choice of specialty followed by 'Interest in helping people' (73.4% and 'Intellectual content of the specialty' (73.3%). These three intrinsic factors were similarly rated by respondents in 2002.
- The most influential extrinsic determinants of choice of specialty among recent entrant respondents in 2004 were the work culture typical of the specialty, opportunity to work flexible hours, hours of work typical of the specialty, work experience since graduation, the kinds of patients typical of the specialty, opportunity for procedural work and influence of consultant/mentors. These factors were also ranked among the top seven by doctors in vocational training in 2002.

- In 2004 and 2002, women rated hours of work typical of the discipline, opportunity to work flexible hours, and appraisal of own domestic circumstances, more highly than men, while men rated opportunity for procedural work, perceived prestige of the discipline, and perceived financial and career advancement prospects more highly than women.

Satisfaction with choice of specialty

- The majority (86%) of the 4,529 postgraduate doctors participating in the two AMWAC surveys in 2004 were satisfied or very satisfied with the specialty they had selected.
- Between 2002 and 2004, 8% of Wave 2 respondents had changed specialty. Reasons for a change in specialty included:
 - planned career decision;
 - better working environment;
 - less stressful work environment;
 - greater flexibility in work hours and in combining work and training;
 - failure to progress in preferred discipline.
- Among Wave 2 respondents, satisfaction with choice of specialty was a predictor of the decision to ($p < 0.01$):
 - continue in, or change specialty;
 - leave the training program without completing it;
 - take a break from training; or
 - leave medicine altogether.

Hours of work

Hours worked, 2002 and 2004

- There was an overall reduction of 1.8 hours (from 49.9 to 48.1), on average, worked per week by Wave 2 respondents between 2002 and 2004 ($p < 0.01$).
- Male and female Wave 2 respondents, single and married doctors, doctors with no dependent children and doctors with one to two dependent children were working fewer hours, on average, per week in 2004 than in 2002. Doctors with three or more children were working 1.4 hours longer, on average, per week.
- Wave 2 respondents who had completed vocational training and were practising as qualified specialists were, on average, working 3.1 fewer hours per week in 2004 than they were in 2002 (ie from 46.3 to 43.2).
- On the other hand, there was an increase of 1.9 hours in the average hours worked per week by the 1,441 Wave 2 respondents in full-time vocational training in 2004 (viz., from 50.6 hours per week in 2002 to 52.5 hours in 2004 with wide variation across specialties).
- Between 2004 and 2002, the proportion of Wave 2 respondents (still in vocational training in 2004) who were training part-time increased from 8.6% to 13.6% and this increase was associated with a reduction of 2.6 in the number of hours worked, on average, per week, by all doctors still in vocational training in 2004.
- Recent entrant respondents worked, on average, 1.2 hours less in 2004 (47.2 hours) than their counterparts in 2002 (48.4 hours) and 77% were satisfied with the number of hours they were working. Female trainees were less satisfied than male trainees and doctors with dependent children were less satisfied than those with no dependent children ($p < 0.01$).
- Male recent entrant respondents in 2004 worked fewer hours per week (49.2, on average) than male doctors in vocational training in 2002 (51.3). The reverse was the case for female respondents, however, who worked more hours per week (46.8, on average in 2004) than their counterparts in 2002 (44.9 hours).

- Of recent entrant respondents in 2004, 6.5% were training part-time or in a job-share arrangement. The comparative 2002 figure was 9.4%.

Enactment of career plans re hours of work

- Of Wave 2 respondents who by 2004 were working as qualified specialists, their stated 2002 'long-term' intentions re hours of work was predictive of actual hours worked in 2004 ($p < 0.01$).

Hours worked and stress

- As in 2002, both 2004 surveys found an association between stress scores and:
 - number of hours worked, on average, per week ($p < 0.01$); and
 - satisfaction with hours of work ($p < 0.01$).
- Between 2002 and 2004, there was a significant decrease in the proportion of Wave 2 respondents with high to very high stress scores ($p < 0.01$), (from 56.4% to 46.3%). Wave 2 respondents who had completed vocational training had significantly lower stress scores than doctors still in vocational training ($p < 0.01$).
- Using linked data from the Wave 1 and Wave 2 surveys, the study found that an increase in work hours was predictive of an increase in stress scores ($p < 0.01$).
- Of recent entrant respondents in 2004, 48.4% had high to very high stress scores. The comparative figure for 2002 was 55.8%.

Future intentions re hours of work

- Of Wave 2 respondents who were:
 - working as qualified specialists in 2004, 32% of men and 53% of women planned to change their current work hours over the following two years, mainly toward reducing their hours.
 - in vocational training in 2004, there was a reduction in the proportion planning to work 45 hours or more per week over the following two years (from 35.8% to 29%) and an increase in the proportion planning to work less than 40 hours per week (from 42.3% to 48.2%).
- Of recent entrant respondents:
 - 22.8% planned to work part-time in the following 3-7 years (13.5% of men and 36.7% of women).
 - 49.4% planned to work less than 40 hours per week in the following 3-7 years (31.8% of men and 66.9% of women).
- Reasons for reducing work hours in the future included to: reduce stress, prevent burnout, care for children, have more time for family and friends and achieve a more balanced lifestyle.

Type of medical work

- In 2004 the majority (84.3%) of Wave 2 respondents who were qualified general practitioners were working in private clinical practice (35.8% in a practice of less than 4 doctors and 48.5% in a practice of 5 or more doctors). Based on their 2002 intentions, more than planned were working in private clinical practice.
- In 2004, the majority (72.5%) of Wave 2 respondents who were working as qualified specialists in a specialty other than general practice, had either a public hospital clinical appointment (43.3%), or were doing a mixture of public/private clinical work (29.2%). Based on their 2002 intentions, fewer than planned were undertaking a mixture of public/private clinical work and more than planned had a public hospital clinical appointment.

Location of medical work

State/Territory of medical work

- Of Wave 2 respondents who by 2004 were working as qualified specialists, their stated 2002 long-term intention of State/Territory of medical work was predictive of State/Territory of medical work in 2004 ($p < 0.01$).
- Of Wave 2 respondents still in vocational training in 2004, their stated long-term plans re State/Territory of medical work indicated a distributional profile consistent with the profile of the Australian population. This was also the situation with recent entrants to vocational training.

Urban/rural location of medical work

- Of the 163 Wave 2 respondents working as qualified specialists in 2004, who in 2002 indicated a preference for working in a rural area, 56% (92) were working in a rural area in 2004. In addition, 6% (51) of the 814 respondents who had indicated a preference to work in an urban location were also working in a rural area.
- Rural background was associated with working in a rural location ($p < 0.01$).
- Only 41.6% of rural based Wave 2 respondents working as qualified specialists in 2004 were satisfied with access to professional development activities, compared with 80.7% of those working in a capital city. This variation in satisfaction applied to both general practitioners and other specialists ($p < 0.01$).

Urban/rural long-term plans (next 3-7 years)

- Of Wave 2 respondents who were:
 - working as qualified specialists in 2004, 143/1012 (14%) were working in a rural location and 37 (25.9%) of these doctors planned to change their location in the following two years.
 - still in vocational training in 2004, 12.8% (222) had plans to work in a rural or remote location and of the 214 who in 2002 thought they would most like to do so in the long-term, 127 (59.4%) remained committed to these plans.
- Of recent entrant respondents:
 - 16% (including 30.3% of GPET trainees) indicated a preference to work in a rural or remote location;
 - positive associations ($p < 0.01$) were observed between preference to work in a rural or remote location and 1) rural background, 2) rural education and training experiences, and 3) rural scholarship/cadetship.
- The questionnaire asked respondents to rank five sets of potential reasons for choosing to work in a particular location using factors derived from an analysis of the qualitative data provided by 2002 survey participants. The overall rankings from participants to both surveys were as follows:
 1. Family and/or social considerations (including proximity to family and friends and children's education and career opportunities);
 2. Consideration for my career (including personal career aspirations/opportunity for advancement, availability of facilities/equipment/professional support, access to continuing professional development, diversity of work, opportunity to use qualifications/skills, government policy constraints and income);
 3. Lifestyle (including preference for living in geographic environment, and access to arts/entertainment/sporting activities);
 4. Consideration for my partner's career; and
 5. Other.

- Variation in the rankings of the above factors was observed based on sex, marital status and number of dependent children. For example, single men ranked 'Consideration for my career' as number 1 followed by 'Lifestyle', while married men with children ranked 'Family and/or social considerations' as number 1, then 'Consideration for my career', followed by 'Lifestyle' and then 'Consideration for my partner's career'. Married women with dependent children, on the other hand, ranked 'Family and/or social considerations' as number 1 followed by 'Consideration for my partner's career', then 'Lifestyle' followed by 'Consideration for my career'.

Education and work environment

Education and training environment

- Of Wave 2 respondents still in vocational training in 2004:
 - there was a significant increase ($p < 0.01$) in the proportion receiving most of their education and training from consultants (from 73.4% in 2002 to 80.2% in 2004) and a decrease in the proportion receiving it from senior registrars (from 11.8% to 2.7%);
 - there was a significant decrease ($p < 0.01$) between 2002 and 2004 in the proportion satisfied or very satisfied with the overall training that they were receiving, respectively, from 72.5% to 64.9%. The reasons for this decrease in satisfaction are not known.
- The majority (87.9%) of recent entrant respondents were training in their program of first choice.
- Of recent entrant respondents:
 - 70% were satisfied or very satisfied with their education and training program overall, while 10.4% were dissatisfied or very dissatisfied;
 - The least satisfying features of their education and training program were 'time and support to develop skills in areas such as research etc' (34.8% satisfied/very satisfied) and 'time and support to participate in formal educational activities' (54.9% satisfied and very satisfied);
 - those aged 30-39 years were less satisfied than those aged 40 years and over and those aged under 30 years with the training they were receiving 'overall' and with formal supervision and quality of formal educational activities ($p < 0.01$). The reasons for this variation are not known;
 - 46.1% had a financial debt associated with their education and training program of more than \$10,000 and these respondents were less satisfied with both 'access to formal educational activities' and the 'quality of formal educational activities' ($p < 0.01$). Reasons for this variation in satisfaction with features of their education and training program based on level of debt are not known.

Work environment

- Although starting from a low base, between 2002 and 2004, there was a significant increase in the proportion of Wave 2 respondents satisfied or very satisfied with their pay (from 42.9% to 50.9%) and with time for family and social and recreational activities (from 33.9% to 40.9%). Analysis of the data by career status indicated that satisfaction with these two features of the work environment had increased most markedly for those respondents who had completed vocational training during the previous two years.
- Among Wave 2 respondents, satisfaction with features of the work environment increased between 2002 and 2004 for all nine features except supervision.
- Of recent entrant respondents:
 - 65.5% were satisfied or very satisfied with their 'overall' working conditions;

- 76.8%, 69.6% and 68.2%, respectively, were satisfied with 'support from medical staff in your discipline', 'support from nursing staff' and 'support from allied health staff';
- 53.4% were satisfied with recognition and 44.2% were satisfied with pay.
- As in 2002, both 2004 surveys found an association ($p < 0.01$) between stress scores and satisfaction with 'overall' working conditions.
- Using linked data from the Wave 1 and Wave 2 surveys, the study found that a significant increase in level of satisfaction with working conditions was predictive of lower stress scores ($p < 0.01$).

Satisfaction with time for family, lifestyle and recreation

- Of recent entrant respondents only 39.1% were either satisfied or very satisfied with time available for family, social and recreational activities.
- As in 2002, both 2004 surveys found an association between stress scores and satisfaction with time for family and social activities ($p < 0.01$).
- Using linked data from the Wave 1 and Wave 2 surveys, the study found that a significant increase in level of satisfaction with time for family and social activities was predictive of lower stress scores ($p < 0.01$).

Workforce attrition and retention

- The findings from both 2004 surveys (using career status and short-term plans) suggest that among postgraduate doctors at this stage of their career:
 - participation in the workforce (Australian and overseas) is between 90% and 95%;
 - attrition is around 0.5% to 2.5% per year (this includes leaving medicine altogether and permanently migrating overseas);
 - at any given point in time 6-19% of postgraduate doctors can be expected to be taking a break with the intention of returning to the workforce (twice as many women as men); and
 - 10-20% can be expected to be overseas with the intention of returning to the Australian workforce. (These findings are similar to Lambert et al (2003) who reported that of 5,702 United Kingdom medical graduates from 1999 and 2000, '10.3% "definitely" or "probably" did not intend to practise medicine in the United Kingdom for the foreseeable future'. Comparative figures for their 1993 and 1996 cohorts were 9.7% and 9%, respectively).

Conclusions

Choice of discipline

1. Three intrinsic factors (appraisal of own skills/aptitudes, interest in helping people and intellectual content of the specialty) are the most influential factors in choice of specialty.
2. Influential extrinsic factors are discipline-related work cultures and working conditions. Experience with these factors occurs throughout medical school and the early postgraduate years, and most doctors choose their specialty during these years. It follows that interventions to influence graduates' choice of specialty should target these critical years.
3. When choosing a specialty, women give greater consideration to the likely impact of discipline-related work cultures and working conditions on their personal domestic circumstances than do men.
4. Number of years to complete training, opportunity to work flexible hours and hours of work typical of working in the discipline are of greater importance to postgraduate doctors who choose general practice than those who choose some other specialty.
5. The effects of debt associated with medical education and training on choice of specialty need monitoring in the future given that in 2004 it was found to be starting to have an influence.
6. Some specialties appear to have developed relatively more effective recruitment strategies than others given the early stage in their career at which most trainees in these specialties make their choice (eg more than 70% of responding RACS and RACP-PCHD trainees in both 2002 and 2004 had chosen their specialty by the end of PGY2 compared with an overall average of 58%). Further research is needed into the strategies used by these training programs with a view to assisting programs with recruitment problems.

Rural workforce initiatives

7. The findings of these two surveys support initiatives to increase the number of 1) rural background entrants to medical schools, 2) rural scholarships/cadetships, and 3) rural education and training experiences.

Hours of work

8. The findings of these two AMWAC surveys about a reduction in hours worked, on average, by postgraduate doctors are consistent with findings from other data sets (eg the AIHW Medical labour force survey data). The findings from the AMWAC longitudinal study suggest that doctors who have completed vocational training have greater control over the hours they work than doctors in full-time vocational training.

Vocational training

9. Further research is needed to explore factors influencing variation across specialties in the career progression of doctors in vocational training.
10. Supervision (both education and workplace) is a critical element of trainee satisfaction with vocational training. A lack of adequate supervision is associated with comparatively low levels of satisfaction.
11. Compared with Wave 2 respondents who had completed vocational training, a high proportion (52.3% versus 38.8%) of those still in vocational had high to very high stress scores. Further research is needed to understand more about the factors influencing

these scores. It could be that many trainees feel a lack of control over their lives given long work hours combined with uncertainty over exit examination outcomes.

Continuing professional development for recently qualified specialists in rural areas

12. Access to continuing professional development needs to be improved for postgraduate doctors working as qualified specialists (general practitioners and others) in rural areas.

Type of medical work

13. Factors influencing postgraduate doctor decisions about type of medical work need to be monitored in the future given the fairly substantial percentage (12%) of qualified specialists (Wave 2 respondents) who planned to change the type of work they do.

Influence of medical schools on career decisions

14. Further research is needed to explore factors influencing variation:
 - Among specialties in the representation of International Medical Graduates.
 - Across Australian medical schools in the specialties chosen by graduates from the respective schools.
 - Across Australian medical schools and between State/Territory in the proportion of medical graduates moving interstate to undertake vocational training.

Recommendations

The Working Party recommends:

1. An analysis is undertaken to determine the statistical viability of administering a Wave 3 survey involving respondents and non-respondents to the AMWAC 2004 Wave 2 survey of doctors participating in the longitudinal study and if assessed to be statistically viable a Wave 3 survey be undertaken in 2006.

The purpose of the Wave 3 survey is to monitor both the career decisions of postgraduate doctors as they progress in their professional career; and the factors influencing these decisions. Career decisions of particular relevance to workforce planning continue to be those about choice of specialty, hours of work, workforce attrition/retention, workforce participation, type of medical work, and choice of location (State/Territory and geographic).

2. All 2004 survey respondents are sent the 'Key Findings' document together with a covering letter signed by the Chair of AMWAC thanking them for their participation in the study and indicating how the findings arising from the 2002 study have been published and used by governments and the medical profession.
3. That AMWAC continue to work with the Committee of Deans of Australian Medical School's (CDAMS) with a view to promoting links between the Medical Schools Outcomes Database Project (MSOD) and AMWAC data collections to improve understanding of factors influencing the career decisions of undergraduate and postgraduate doctors.

PART 2: RESPONSE RATE ANALYSIS

Wave 2 (2004) survey

- As indicated in Table 1, 2,817 doctors responded to the Wave 2 (2004) survey of postgraduate doctors participating in the AMWAC longitudinal study and this figure represented 71.4% of doctors who responded to the Wave 1 (2002) survey (and who agreed to participate in the longitudinal study) and 35.6% of the original target population of all doctors in vocational training in September 2002.
- The specialty and age and sex profiles of Wave 2 respondents were reasonably consistent with the profiles of the original target population (Tables 2 and 3). Of note was the relatively low representation of surgeons compared with their representation in the target population and the relatively high representation of women among respondents in both 2002 and 2004.

Table 2: Specialty profile: 2002 target population and Wave 1 (2002) and Wave 2 (2004) survey respondents (%)

	2002 Target population*	2002 respondents	2004 respondents
	n=7906	n=4295	n=2817
General practice	17.6	17.6	17.7
Adult medicine	17.0	15.5	15.5
Surgery	17.0	15.8	12.6
Anaesthesia	9.2	11.3	11.5
Emergency medicine	8.2	9.5	9.3
Psychiatry	8.8	8.4	8.4
Paediatrics and child health	5.9	6.4	6.9
Radiology	3.3	3.6	3.9
Pathology	3.0	3.0	3.4
Obstetrics and gynaecology	2.6	3.0	3.3
Ophthalmology	1.1	1.6	1.6
Rehabilitation medicine	1.3	1.4	1.6
Intensive care medicine	2.7	0.6	1.0
Dermatology	0.7	0.8	1.0
Occupational medicine	0.6	0.6	0.9
Public health medicine	0.6	0.7	0.9
Medical administration	0.4	0.4	0.5
Total	100.0	100.0	100.0

*The target population was all doctors in vocational training in September 2002 as per the records of Australian medical colleges.

- Because the AMWAC database contained Wave 1 survey data for the 2004 target group of 3,946 doctors, it was possible to compare the background characteristics of Wave 2 respondents and non-respondents. These comparisons indicated that a higher proportion of female doctors than male doctors responded to the Wave 2 survey, respectively, 72.8% and 66.2%, a higher proportion of Australian medical school graduates than overseas medical school graduates responded (respectively 70.5% and 62.1%), and a higher proportion of rural background doctors responded than urban background doctors (respectively, 73.1% and 68.1%).

Table 3: Sex and age profile: 2002 target population and Wave 1 (2002) and Wave 2 (2004) survey respondents

	2002 Target population n=7906	Wave 1 respondents 2002 n=4295	Wave 2 respondents 2004 n=2817
%Male	55.6 ¹	53.5	51.0
%Female	44.4 ¹	46.5	49.0
Average age			
- General practitioners	33.9 ²	33.0	32.7 ³
- Other specialists	32.8 ²	32.4	32.5 ³

Notes: 1. Source: Medical Training Review Panel (2002), Medical Training review Panel Sixth report, Commonwealth Department of Health and Ageing, Canberra; Tables 1, 6 and 9. 2. Source: Australian Institute of Health and Welfare (2004) Medical Labour Force 2002, AIHW, Canberra; Additional Tables (Primary care practitioners; Specialists and specialists-in-training). 3. Average age in 2002.

- The Working Party concluded that the specialty profile and demographic profile of Wave 2 respondents were sufficiently consistent with those of the original cohort to provide representative data of factors influencing the career decisions of postgraduate doctors in 2004.
- The Working Party noted that the response rate to this AMWAC survey was similar to that achieved by Lambert, Goldacre and Turner (2003) who reported a response rate of 67.1% (5702/8,494) to their 'career choice' survey of 1999 and 2000 United Kingdom medical graduates. As with this AMWAC Wave 2 survey, these researchers also had a significantly ($p < 0.01$) higher response from female graduates than from male graduates, respectively, 73.7% and 60.1%.

2004 survey of recent entrants to vocational training

- As indicated in Table 1, in 2004, 3,075 questionnaires were mailed to all recent entrants to vocational training (ie commenced vocational training since 1 October 2002) and 1,712 (57.4%) responded.
- Tables 4 and 5 show that the age and specialty profiles of recent entrant survey respondents were consistent with the target population while the representation of women among respondents was relatively high compared with their representation in the target population. In addition, the State/Territory of training and medical school of graduation distributional profiles of survey respondents were consistent with those of the target population (as indicated by relevant data from the Medical Training Review Panel and the Committee of Deans of Australian Medical Schools).

Table 4: Sex and age profile of recent entrant respondents compared with target population

	Target population (2004) n=3075	Respondents (2004) n=1712
%Male	55.3 ¹	49.7
%Female	44.7 ¹	50.3
Average age		
- General practitioners	33.9 ²	34.8
- Other specialists	32.7 ²	32.3

Notes: 1 Source: Medical Training Review Panel (2004), Medical Training review Panel Eighth report, Commonwealth Department of Health and Ageing, Canberra; Tables 1, 7, 8 and 10. 2. Source: Australian Institute of Health and Welfare (2005) Medical Labour Force 2003, AIHW, Canberra; Additional Tables (Primary care practitioners; Specialists and specialists-in-training).

Table 5: Specialty profile of responding recent entrants to vocational training compared with the target population, 2004 (%)

	2004 Target population*	2004 respondents
	n=3046	n=1712
General practice	29.4	31.5
Adult medicine	11.5	10.8
Surgery	10.4	9.8
Anaesthesia	6.4	6.7
Emergency medicine	8.7	9.0
Psychiatry	6.5	5.9
Paediatrics and child health	2.4	2.8
Radiology	4.1	5.0
Pathology	4.2	4.1
Obstetrics and gynaecology	2.9	3.7
Ophthalmology	1.6	2.3
Rehabilitation medicine	1.1	1.0
Intensive care medicine	4.4	2.9
Dermatology	1.1	1.5
Occupational medicine	1.0	1.0
Public health medicine	1.4	1.5
Medical administration	1.3	1.0
Total	100.0	100.0

*The target population was all doctors who had commenced vocational training since 1 October 2002 as per the records of Australian medical colleges.

- The Working Party concluded that, while not ideal, the response to the survey of recent entrants was acceptable and that the specialty and demographic profile of respondents was sufficiently representative of the target population to provide meaningful information about factors influencing the careers decisions of recent entrants to vocational training in 2004.

PART 3: BACKGROUND CHARACTERISTICS, CAREER STATUS AND SPECIALTY

Background characteristics

- Wave 2 (2004) survey respondents were, on average, one year older than respondents to the survey of recent entrants to vocational training and a higher proportion were married/partnered and had dependent children (Table 6).
- A higher proportion of recent entrant respondents (21.9%) than Wave 2 respondents (13.2%) were International Medical Graduates (Table 6).
- A higher proportion of recent entrant respondents (46.1%) than Wave 2 respondents (18.5%) had a debt burden associated with their medical education and training greater than \$10,000 (Table 6).

Table 6: Background characteristics of Wave 2 respondents and respondents to the survey of recent entrants to vocational training, 2004

	Wave 2 survey (n=2817)	Recent entrants (n=1724)
Average age	34.5	33.1
% Male	51.0	49.7
% Female	49.0	50.3
% Married/partnered	76.1	64.8
% Dependent children	83.7	29.6
% International Medical Graduates	13.2	21.9
% Debt greater than \$10,000	18.5	46.1
% Rural background	24.2	21.2
% GPs rural background	28.7	22.1
% Rural Scholarship/Cadetship	4.4	12.2

Career status profile

- By 2004, 35% of Wave 2 survey respondents had completed vocational training, 62.9% were in vocational training, 1.4% had left vocational training without completing the program and 0.6% had left medicine altogether (Table 7).
- In total, 6% of Wave 2 respondents were taking a break.
- The majority (96%) of recent entrants to vocational training were in vocational training and practising, 3.6% were taking a break and 0.4% had left medicine altogether.

Table 7: Career status profile of Wave 2 respondents and respondents to the survey of recent entrants to vocational training, 2004

Career status	Wave 2 survey (n=2817)	Recent entrants (n=1724)
% Completed training/practising	33.0	-
% Completed training/taking a break	2.1	-
% In vocational training/practising	59.0	96.0
% In vocational training/taking a break	3.9	3.6
% Left training without completing	1.4	-
% Left medicine altogether	0.6	0.4
Total	100.0	100.0

Specialty profile

- In total, 83.6% of Wave 2 2004 survey respondents were in seven specialties, viz., general practice, adult medicine, surgery, anaesthesia, emergency medicine, psychiatry and paediatrics and child health (Table 8).
- The specialty profile of recent entrants to vocational training was different to that of Wave 2 survey respondents. For example, 31.5% of recent entrants were GPET trainees, while 17.7% of Wave 2 survey respondents were general practice trainees or qualified general practitioners (Table 8).

Table 8: Specialty profile of Wave 2 respondents and respondents to the survey of recent entrants to vocational training, 2004

	Wave 2 survey (n=2817)	Recent entrants (n=1724)
General practice	17.7	31.5
Adult medicine	15.5	9.8
Surgery	12.6	10.8
Anaesthesia	11.5	6.7
Emergency medicine	9.3	9.0
Psychiatry	8.4	5.9
Paediatrics and child health	6.9	2.8
Radiology	3.9	5.0
Pathology	3.4	4.1
Obstetrics and gynaecology	3.3	3.7
Ophthalmology	1.6	2.3
Rehabilitation medicine	1.6	1.0
Intensive care medicine	1.0	2.9
Dermatology	1.0	1.1
Occupational medicine	0.9	1.0
Public health medicine	0.9	1.5
Medical administration	0.5	1.0
Total	100.0	100.0

PART 4: LONGITUDINAL COHORT STUDY – 2004 WAVE 2 SURVEY

The reader should note that while the findings contained in the earlier AMWAC report (Career Decision Making by Doctors in Vocational Training, 2002) contained information about 4,259 cases, the focus of this section of the summary is the 2,817 doctors who responded to both the Wave 1 survey in 2002 and the Wave 2 survey in 2004.

A. Findings relating to all Wave 2 respondents

Demographic characteristics, 2002 and 2004

Age and sex

- Obviously, between 2002 and 2004, the age profile of Wave 2 survey respondents had increased by two years. In 2004, the age of Wave 2 survey respondents ranged from 25 to 64 years, with an average age of 34.5 years.
- In total, 1,438 (51%) Wave 2 respondents were male and 1379 (49%) were female.

Marital status and dependent children

- In 2004, 21.5% of respondents were single, 76.1% were married/partnered, 2.2% were separated or widowed and 44.4% had dependent children.
- Of the 767 respondents who were single in 2002, 161 (21%) became married or partnered between 2002 and 2004, while 4 who were partnered in 2002 became separated or widowed.
- Between 2002 and 2004, the proportion of respondents with dependent children increased from 32.1% to 44.4%.

Citizenship

- In 2004, 92.9% of respondents were Australian citizens and 6.7% were permanent residents.
- Between 2002 and 2004, the number of respondents who were Australian citizens increased by 57 and, conversely, the number with permanent resident visa status decreased.

Aboriginal or Torres Strait Islanders

- In total, 10 (0.4%) Wave 2 respondents identified as Aboriginal or Torres Strait Islanders and of these doctors 7 were women and 3 were male. This compares with 0.3% of medical graduates reported as being Indigenous between 1989 and 1995 (AMWAC report 1997.7), 1% of specialists-in-training according to data from the AIHW Medical labour force surveys (2002 and 2003) and 0.18% of the total medical workforce (AIDA 2005).

Rural background

- In total, 681 (24.2%) Wave 2 survey respondents were from a rural background.

Educational characteristics, 2002 and 2004

Year of graduation from medical school

- The majority of Wave 2 respondents completed their basic medical degree between the age of 20 to 29 years and graduated from medical school between 1992 and 1999.

Tertiary qualifications

- Between 2002 and 2004, 254 (9%) respondents had completed a tertiary qualification, with the majority (54.8%) of these doctors completing a Masters degree, 13.9% a PhD/MD, 4.8% a bachelors degree, 1.7% a bachelors and Masters degree, and 24.8% some other type of qualification (e.g., certificates, diplomas, postgraduate diplomas). Fields of study were mainly related to their medical career (eg aviation medicine, rural

medicine, diplomas in obstetrics and gynaecology and child health, graduate diplomas in anatomy, evidence-based practice).

- Of the 364 respondents who were undertaking tertiary qualifications in 2002, 41.8% had completed a tertiary qualification in the last two years and 58.2% had not, while 96 (4%) of 2,389 doctors who were not undertaking a tertiary qualification in 2002 had also completed a tertiary qualification in the past two years.
- In total, 370 (13.1%) Wave 2 respondents had commenced a tertiary qualification in the previous two years, 42.9% of whom were undertaking a masters degree, 34.7% a PhD/MD and the remaining 22.4%, either a bachelors degree or some other qualification, (e.g., a diploma or graduate diploma). Fields of study were mainly related to their medical career and were similar to those listed for doctors who had completed additional tertiary qualifications. A higher proportion of earlier graduates (i.e., graduated prior to 1990) completed a tertiary qualification during the previous two years, while a higher proportion of recent graduates commenced a tertiary qualification during this period.
- An above average proportion of psychiatrists had completed a tertiary qualification (i.e., 26.4% compared with the average of 9.1%). Other specialties with a relatively high number of respondents completing tertiary qualifications were intensive care medicine (14.3%), dermatology (15.4%), occupational medicine (52%), public health medicine (37.5%) and medical administration (15.4%). Specialties with an above average number of respondents commencing a tertiary qualification in the previous two years were adult medicine (25.2%), paediatrics and child health (25.4%), occupational medicine (20%), public health medicine (28.6%), and medical administration (38.5%). Some specialist training programs include a tertiary qualification as a mandatory or highly desired component of training.

Rural scholarship/cadetship

- In total, 123 (4.4%) Wave 2 respondents had some type of rural scholarship or cadetship. Of doctors holding a rural scholarship/cadetship in 2004, 15 held a Rural Australian Medical Undergraduate Scholarship (RAMUS), 43 were on a variety of State/Territory rural bonded scholarships, 3 had received assistance with their Higher Education Contribution Scheme (HECS) debt, and 63 had received some other type of rural award. These 'other rural awards' included John Flynn Scholarship, Queensland government scholarship, New South Wales Rural Health Cadetship, Rural Doctors Network and many other scholarships and incentive schemes.
- Of the 123 respondents with a rural scholarship/cadetship, 65 were from a rural background and 58 were from an urban background. A small, but significantly higher proportion of doctors with a rural background, held a rural scholarship/cadetship than doctors with an urban background, respectively, 9.5% (65/681) and 2.7% (58/2136).

Medical education and vocational training costs

- In total, 645/2817 (22.9%) respondents indicated that the cost of training and having financial debt as a result of their medical education and training had influenced their career plans and/or their lifestyle in the past two years and most (98.4%) of these doctors provided comments.
- In total, 13.2% of respondents estimated their vocational training costs in 2004 (12-month period) as zero, 20.5% at less than \$1,000, 37% at between \$1,000 and \$5,000, 17.9% at between \$5,000 and \$10,000, while 11.4% estimated their costs at \$10,000 or more. Of the 321 doctors with estimated costs of \$10,000 to \$200,000, the average of these estimated costs was \$20,600. A high proportion of recent medical graduates compared with earlier graduates had higher vocational training costs in 2004 ($p < 0.001$).
- In 2004, respondents were also asked about their total level of financial debt as a result of their medical education and training. In total, 68.4% had no debt, 13.1% had a debt of

less than \$10,000, and 11% had a debt of between \$10,000 to \$20,000, while 7.5% had a debt of \$30,000 or more. No differences in level of financial debt were observed based on sex, urban/rural background or location of medical school (ie Australia or overseas), but surgical trainees carried a higher financial debt than other respondents.

- Comparatively few doctors (11.2%[280/2505]) had a HECS debt, 22.6% (559/2473) had debt associated with their vocational training, and 17.8% (425/2377) had debt associated with other unavoidable education and training expenses.

Influence of debt on career and lifestyle

- Of the 578 respondents who commented on the influence of debt on their career choices and lifestyle, the most frequently mentioned factors were:
 - restrained holidays and social life;
 - decreased savings for other investments;
 - changed career prospects (eg decided against undertaking further sub-specialty training);
 - increased working hours to supplement income; and
 - prompted relocation to attend training or find work.

Career status, 2002 and 2004

- By 2004, 35.1% (989) of respondents had completed vocational training, 62.9% (1,772) were still in vocational training, 1.4% (39) had left vocational training without completing the program (all of whom were contributing to the workforce) and 0.6% (17) had left medicine altogether.
- Of respondents who had completed vocational training, 87.8% were practising as qualified specialists in Australia, 3.5% were practising overseas, 2.6% were undertaking further study, 6.1% were taking a break with the intention of practising either in Australia (56) or overseas (4).
- Of respondents who were still undertaking vocational training, 87.9% were practising in a vocational training program, 5.9% were completing an additional specialist qualification and 6.2% were taking a break from vocational training with the intention of returning to training.
- For 67.7% (1,895) of Wave 2 respondents still participating in the medical workforce in 2004, their career progress in the previous two years was consistent with their expectations in 2002. This was particularly the case for respondents who had completed vocational training by 2004.
- Among respondents still in vocational training in 2004, 47.8% (790) were taking longer to complete vocational training than they had previously expected. Training programs with a relatively large proportion of trainees who had extended their expected year of completion of vocational training were general practice, psychiatry, emergency medicine and paediatrics and child health. It is useful to note that these training programs had an above average proportion (viz., more than 14.1%) of trainees in part-time training in 2004 and two of these training programs (general practice and emergency medicine) had a relatively large proportion of trainees who were taking a break from training in 2004.

Workforce participation and attrition

- The findings from Wave 2 survey respondents suggest that participation in the Australian medical workforce among postgraduate doctors at this stage of their career is around 92.2%, that attrition is around 0.4% per year (ie 10.5/2,817), that around 7.2% of doctors can be expected to be taking a break with the intention of returning to the workforce and that a greater proportion of women than men can be expected to take time out.

- The Working Party considered that care needs to be taken in using these figures as an indication of the level of workforce participation and attrition because the workforce status of 33.8% of the 4,295 doctors who were first surveyed in 2002 is not known. This figure includes 241 doctors who refused to participate in the Wave 2 survey, 71 doctors who could not be traced, together with the 1,129 who failed to respond to the Wave 2 survey.
- The Working Party also considered that estimates of workforce participation and attrition should also take into account the short-term career plans of participants in the three AMWAC surveys.

Choice of specialty, 2002 and 2004

- Between 2002 and 2004, 92.1% of Wave 2 survey respondents had continued in the discipline in which they were training in 2002, while only 7.9% had changed discipline.
- Respondents in 2004 who had completed vocational training and were practising as qualified specialists were more satisfied than respondents in any other category with their choice of specialty, while respondents who had left training without completing the program, or were taking a break from training were comparatively less satisfied.
- When considering the cohort group as a whole, no difference was observed in level of satisfaction with choice of specialty in 2002 and 2004, with 87% satisfied or very satisfied with their choice of specialty in both years. Level of satisfaction with choice of specialty in 2002 was a strong predictor of level of satisfaction in 2004 (Odds Ratios 9.1 satisfied, 38.7 very satisfied; $p < 0.01$).
- The study found relationships between satisfaction with choice of specialty in 2002 and the decision to:
 - continue in, or change, specialty between 2002 and 2004;
 - leave medicine altogether;
 - leave the training program without completing training;
 - take a break from vocational training.
- These findings suggest that dissatisfaction may be one of the reasons for doctors to change specialty, leave medicine, leave the training program, and to take a break from training.

Hours worked, 2002 and 2004

- There was an overall reduction of 1.8 hours in the number of hours worked, on average, per week by Wave 2 respondents from 49.9 hours per week in 2002, to 48.1 hours in 2004. A reduction in hours worked in the previous two years was observed among:
 - male and female respondents;
 - respondents with and without dependent children; and
 - respondents who had completed vocational training and respondents still undertaking vocational training.
- However, closer analysis revealed variation by demographic variables and by career status. For example in 2004, on average:
 - respondents in vocational training worked 6.3 more hours per week than doctors who had completed vocational training, respectively, 49.5 and 43.2 hours;
 - male respondents worked 6 more hours per week than female respondents, respectively, 50.9 and 44.9 hours;
 - doctors without dependent children, on average, worked 2-4 more hours per week than doctors with dependent children.

Full-time/part-time/job-share status of doctors still in vocational training in 2004

- The following findings indicate that the overall reduction in the hours worked by doctors still in vocational training in 2004 was due to the increase in the number of these doctors working part-time (viz., from 8.6% in 2002 to 13.6% in 2004).
- Of the 1,700 respondents still in vocational training in 2004:
 - Between 2002 and 2004, there was a reduction in the number in full time training and a corresponding increase in the number in part time or job share training. In 2004, 86.4% were in full time training, and 13.6% were in part time or job share training. Comparative 2002 figures for this group of respondents were 91.3% and 8.6%.
 - In both 2002 and 2004, a greater percentage of women were in part-time training than men, respectively, 15.7% and 4.4% in 2002, and 23.4% and 5.5% in 2004 and, on average, these trainees worked 32.8 hours per week in 2004.
 - There was a 1.9 hour increase in the number of hours worked per week, on average, by the 1,456 Wave 2 doctors in full-time vocational training in 2004, viz., from 50.6 hours in 2002 to 52.5 hours in 2004;
 - Men and women in full-time training, on average, worked 53.7 and 50.8 hours, respectively, per week, in 2004, while the corresponding figures for 2002 were 52 and 48.6 (a differential of 2.9 hours in 2004 and 3.4 hours in 2002);
 - On average, respondents training with RACS and RANZCOG worked the longest hours per week in both 2002 and 2004, respectively, 60.3 and 56.7 hours and 62.5 and 54.1 hours. In 2004, female trainees in these two training programs worked longer hours, on average, than male trainees. For example, RACS female trainees worked, on average, 66.2 hours and male trainees 64.5 hours. Comparative figures for RANZCOG trainees were 57.4 and 57.1.

Satisfaction with hours worked

- In 2004, 69.5% of respondents considered that the hours they worked were about right, 27.9% thought they worked too many hours, while 2.6% thought they worked too few. Comparative 2002 figures for this group of doctors were 70.5%, 27.6% and 1.9%;
- In 2004, a higher proportion of male doctors (31.3%) than female doctors (24.1%) perceived that they were working too many hours and an above average proportion (ie 27.9%) of doctors working in five specialties (surgery [50.1%], obstetrics and gynaecology [34.1%], rehabilitation medicine [34.1%], intensive care medicine [38.5%] and occupational medicine [36%]) considered that they were working too many hours.

Satisfaction with features of the work environment, 2002 and 2004

Working conditions

- Respondents in 2002 and 2004 were asked to rate 9 features of their work environment, viz., supervision, pay, facilities and equipment, recognition, support from medical staff in their own discipline, support from other medical staff, support from nursing staff, support from allied health staff, and overall working conditions and in 2004 Wave 2 survey respondents were most satisfied with workplace facilities and equipment, support from medical staff in their own discipline and support from nursing staff.
- Between 2002 and 2004 the percentage of Wave 2 respondents who were satisfied or very satisfied with their working conditions increased for all 9 features except supervision. The greatest increases in satisfaction were with pay, overall working conditions, support from medical staff in other disciplines, and recognition for their work ($p < 0.001$).
- Wave 2 female respondents were more satisfied than male respondents in 2004, with workplace facilities and equipment, recognition, support from medical staff in other

disciplines, support from nursing staff, support from allied health staff and overall satisfaction with working conditions ($p < 0.01$).

Time for family and social activities

- In 2004, only 40.9% of Wave 2 survey respondents were satisfied with time for family and social activities. However, this represented an increase in the proportion of respondents who were satisfied with this feature of their work environment between 2002 and 2004, respectively, from 33.9% to 40.9% ($p < 0.01$).

Stress and features of the work environment, 2002 and 2004

Stress scores, 2002 and 2004

- In 2004, 46.3% of Wave 2 survey respondents scored their level of stress as being high or very high, while 34% scored it as medium and the remaining 19.7% scored it as low or very low. These scores represented a significant decrease in the proportion of doctors who scored 'high' to 'very high' stress between 2002 and 2004, viz., down from 56.4% to 46.3% ($p < 0.001$).
- Differences were also examined based on career status and showed that the most highly stressed respondents in 2004 were practising in a vocational training program (52.3% with high to very high stress scores), while respondents with the lowest scores were those doctors who had completed vocational training and were practising as qualified specialists (38.8% with high to very high stress scores) and respondents who were taking a break followed by those who had left their training program without completing the program.
- Differences among specialties in change in stress scores between 2002 and 2004 were examined and indicated that, compared with the pooled scores for all other specialties, a greater reduction occurred in the stress scores of general practice respondents ($p < 0.01$).
- Variation in 2004 stress scores were also observed ($p < 0.01$) among the other specialties (ie excluding general practice). Specialties with a higher than average (ie above 46.3%) proportion of respondents who scored their level of stress as being high to very high included obstetrics and gynaecology (62.2%), dermatology (59.3%), psychiatry (55.4%) and surgery (53%).

Stress scores and features of the work environment

- As in 2002, associations (using ordinal logistic regression analysis) were observed between stress scores and:
 - number of hours worked, on average, per week;
 - satisfaction with hours of work;
 - satisfaction with 'overall' working conditions; and
 - satisfaction with time for family and social activities.
- A second set of analyses used linked data from 2002 and 2004 and multiple linear regression analysis to explore whether change in hours worked and change in satisfaction with the above features of the work environment was predictive of change in stress score and found that:
 - an increase in work hours was related to an increase in stress scores; and
 - an increase in level of satisfaction with the above features of the work environment was related to lower stress scores.

B. Wave 2 Respondents working as qualified specialists in 2004

Enactment of career plans

As previously indicated, by the time of the Wave 2 survey in 2004, 989 respondents had completed vocational training and of these qualified specialist, 868 were practising in

Australia, 35 were practising overseas, 26 were undertaking further study and 60 were taking a break with the intention of practising. Of these respondents, 953 (96.4%) addressed most of the questions in the relevant section of the questionnaire.

Follow-through on intentions to work full-time or part-time in the long-term

- In 2002, respondents were asked, in the long-term (5 to 10 years), 'Do you plan to practise full-time or part-time?' and in 2004 respondents were asked 'During the past month, on average, how many hours have you worked per week?' In 2002, 66.5% indicated an intention to work full-time and 33.5% an intention to work part-time, and in 2004, 77.2% of these doctors were working full-time (35 hours or more per week) and 22.8% were working part-time (less than 35 hours per week).
- Despite there only being two years between the two surveys, ordinal logistic regression analysis was used to explore whether there was a relationship between stated intentions re hours of work in 2002 and actual hours worked in 2004, while controlling for background variables. A positive relationship was observed between stated intentions in 2002 and actual hours worked as a qualified specialist in 2004 ($p < 0.01$).

Follow-through on intentions re type of medical work

- In 2002, respondents were asked to think about their future medical work and to indicate the type of work that they would most like to be practising in the long-term. In 2004, respondents were asked 'If you are working as a qualified specialist, what type of medicine are you mainly practising?'
- In 2004, the majority (84.4%) of qualified general practitioners were working in private clinical practice (35.7% in a practice of less than 4 doctors and 48.7% in a practice of 5 or more doctors). In 2002, 76.3% of this group of respondents planned to work in private clinical practice in the long-term. Hence, more general practitioners were working in private clinical practice than was indicated by their career intentions in 2002.
- In 2004, the majority (72.2%) of qualified respondents working in a specialty other than general practice, had either a public hospital clinical appointment (43.3%) or were doing a mixture of public/private clinical work (29.1%). In 2002, 53.8% planned to be doing a mixture of public/private clinical work and 25.9% planned to have a public hospital clinical appointment. Hence, fewer than planned 'other' specialists were undertaking a mixture of public/private clinical work and more than planned had a public hospital clinical appointment.

Follow-through on intentions re State/Territory location of medical work

- In 2004, 30.2% of respondents who were qualified specialists were working in New South Wales, 27.4% in Victoria, 16.1% in Queensland, 9.9% in Western Australia, 7.1% in South Australia, 2% in Tasmania, 1.3% in the Northern Territory, 0.9% in more than one State and 3.7% overseas.
- Multinomial logistic regression analysis was used to help answer the question 'How many Wave 2 respondents had enacted their 2002 career plans with respect to State/Territory of medical work?' These analyses indicated that the 2002 stated intention of location ($p < 0.01$) was a significant predictor of actual location in 2004, and for Australian born doctors, State of birth was also a significant predictor of location of medical work for all States except for Victoria.

Follow-through on intentions re geographic location of medical work

- In 2004, 63.6% of general practitioners were working in a capital city, 10.1% in an 'other urban' centre, 10.4% in a rural or remote regional centre and 15.6% in a small rural or remote town.
- Comparative figures for respondents in the other specialties were 79.4% capital city, 10.1% 'other urban' centre, 7.3% rural or remote regional centre, 1.8% small rural or remote town and 1.3% some other location.
- Multinomial logistic regression analysis was used to help answer the question 'How many Wave 2 respondents had enacted their 2002 career plans with respect to geographic location of medical work?' and these analyses indicated that the 2002 stated intention of geographic location was a significant predictor ($p < 0.01$) of actual location in 2004. Background variables associated with working in a rural location in 2004 included rural background, and one to two dependent children.
- In total, 56.4% of the 163 respondents who indicated a preference for working in a rural area in 2002 were actually in rural practice in 2004, while 43.6% were not. Interestingly, of the 814 respondents who indicated, in 2002, that they planned to work in a capital city or other urban area, 51 (6.3%) were working in a rural location in 2004.

Factors influencing choice of location

- In 2004, respondents to the Wave 2 survey were asked to rank five sets of potential reasons in order of importance with 1=most important and 5=least important and within each set, to circle the most important factors. These factors were derived from the 2002 Wave 1 survey and received the following rankings:
 1. Family and/or social considerations;
 2. Consideration for my career;
 3. Lifestyle;
 4. Consideration for my partner's career;
 5. Other factors.
- Factors of most importance in relation to family and/or social considerations were proximity to family and friends followed by children's education and career opportunities.
- Factors of most importance re consideration for my career included:
 - diversity of work;
 - opportunity to use qualifications/skills/training;
 - availability of facilities/equipment/professional support;
 - access to professional development; and
 - personal career aspirations/opportunity for advancement.
- Only 1.8% of respondents indicated that their decision had been 'constrained by government policy obligations'.
- Lifestyle factors of importance were preference for living in the geographic environment, and access to arts/entertainment/sporting activities.

Satisfaction with medical work

- The majority (86.8%) of respondents who, in 2004, were practising as qualified specialists were satisfied or very satisfied with medicine as a career, only 8% were dissatisfied and 9.7% were neither satisfied nor dissatisfied. No differences were observed between general practitioners and respondents in the other specialties (ie as a group).

Satisfaction with type of medical work

- In total, 84.2% of Wave 2 survey respondents who were practising as qualified specialists in 2004 were satisfied or very satisfied with their medical work, 14.6% were neither satisfied nor dissatisfied, while 5% were dissatisfied. No statistical differences were observed by type of medical work or between general practitioners and respondents working in the other specialties (ie as a group).

Satisfaction with State/Territory/other country of medical work

- The majority (81.4%) of respondents who were practising as qualified specialists in 2004 were satisfied or very satisfied with the State/Territory (or other country) in which they were working in 2004, 14.5% were neither satisfied nor dissatisfied, while 4.2% were dissatisfied. General practitioners were more satisfied with the State/Territory location of their medical work than respondents working in the other specialties ($p < 0.01$), while no statistical differences were observed by State/Territory/other country location of medical work in levels of satisfaction.

Satisfaction with geographic location of medical work

- In total, 83.7% of respondents were either satisfied or very satisfied, with the geographic location in which they were working, while 12.3% were neither satisfied nor dissatisfied, and 4% were dissatisfied. No statistically significant differences were observed in levels of satisfaction with geographic location, by the location in which Wave 2 survey respondents who were practising as qualified specialists were working or between general practitioners and respondents in other specialties.

Satisfaction with access to professional development activities

- A significant difference was observed in satisfaction with access to professional development activities and geographic location of current medical work, with respondents working in an urban location (capital city and other urban) significantly more satisfied than doctors working in a rural or remote location ($p < 0.01$). In total, 80.7% of doctors working in a capital city were satisfied or very satisfied with access to professional development activities, whereas the comparative figure for doctors working in a rural or remote centre was 41.6%.
- No statistical difference in satisfaction with access to professional development activities was observed between general practitioners and respondents in the other specialties, with rural and remote doctors less satisfied than urban based doctors in both specialty groups.

Career plans over the next two years

Hours of work

- In total, 786 (82.5% [786/953]) respondents who were practising as qualified specialists in 2004 addressed the question about two year plans re hours of work and of these doctors, 396 (50.3%) planned to maintain their current work hours, while 392 (49.9%) planned to change. Of those who intended to change their work hours, the major change was toward working shorter hours.
- A higher proportion of female respondents (52.9%) planned to change their hours of work, compared with 31.7% (151/477) of male respondents with the trend toward working shorter hours. For example, in 2004, 46.2% of qualified female respondents were working less than 40 hours per week and over the next two years this figure is expected to increase to 71.9% based on indicated two year plans. Comparative figures for male respondents were, 15.3% in 2004, increasing to 23.7% over the next two years.

- Reasons for reducing the number of hours worked included:
 - to reduce stress;
 - prevent burnout;
 - to care for children;
 - to have more time for family and friends; and
 - to achieve a more balanced lifestyle.
- Reasons for increasing work hours included:
 - reduced need for child care because of increased age of children;
 - to increase income; and
 - ability to return to full time work following completion of studies.

Type of medical work

- In total, 80.7% (768/952) of qualified specialists planned to continue with their current type of medical work, while 12.4% (118/952) planned to change. Of those who planned to change, 37 (31.3%) were general practitioners and 81 (68.7%) were in one of the 'other' specialties.
- In 2004, the majority of general practitioners (84.3%) were in private clinical practice and of these doctors 84.9% (214/252) planned to continue with this work in the next two years.
- In 2004, 43.3% of 'other' specialists had a public hospital clinical appointment, and 78.7% (223/283) of these doctors planned to continue with this type of medical work. A further, 29.3% were working 'a mixture of public/private clinical work' in 2004 and of these doctors, 83.2% (159/191) planned to continue. A further, 14.2% were working in private clinical practice and of these doctors 90.3% (84/93) planned to continue.
- Many reasons were given by the 37 general practitioners and 82 'other' specialists who planned to change the type of medical work they were doing. Reasons for general practitioners to change included:
 - Develop additional skills (eg procedural skills, emergency medicine, anaesthesia, women's health);
 - Do more research and/or teaching;
 - Private clinical practice;
 - Reduce on-call work.
 Reasons for 'other specialists to change in order of frequency mentioned included:
 - Pursue special area of interest or gain additional specialist qualifications;
 - Do more consulting/private clinical work;
 - Complete PhD;
 - Gain a public hospital appointment;
 - Do a mixture of public/private clinical work.

Location of medical work

- Of the 704 respondents who addressed the question about change in location of medical work in two years, 69.7% (491/704) planned to remain in the same location and 30.3% (213/704) planned to change.
- Of the 213 doctors who planned to change their location:
 - 46.9% were men and 53.1% were women;
 - 32% were general practitioners and 68% were 'other' specialists.
- Of the 145 doctors working in a rural location in 2004:
 - 37 (25.9%) planned to change location, compared with 18.4% of respondents currently working in a capital city.

- 55.2% were general practitioners and 44.8% were 'other' specialists and of these doctors 25% of general practitioners and 26.2% of 'other' specialists planned to change location.
- Reasons for a proposed change in location of medical work included:
 - to be closer to family and friends;
 - for partner's work;
 - for better work opportunities;
 - for further education;
 - to change type of practice;
 - to gain new work experiences, and
 - for lifestyle reasons.

Other two year plans

- During the next two years, of Wave 2 respondents who had completed vocational training in 2004:
 - 13.9% planned to take time out;
 - 12.1% planned to gain work experience overseas (7.8% [9/115] of these doctors planned to remain overseas permanently);
 - 8.4% planned to commence a higher degree;
 - 3.4% planned to start training in another discipline; and
 - 1.2% planned to drop-out of medicine altogether.

C. Wave 2 respondents still in vocational training in 2004

As previously indicated, 1,772 respondents were still in vocational training in 2004 and of these doctors 1,558 were practising in a vocational training program, 104 were completing an additional specialist qualification, and 110 were taking a break. Of these doctors most addressed the relevant section of the questionnaire, (viz., 100% of those practising in a vocational training program and between 80.8% and 89%, respectively, of doctors undertaking an additional specialist qualification and those taking a break from training).

Training program status

- In total, 57.2% (988/1728) of doctors still in vocational training in 2004 commenced vocational training between 2000 and 2002, 21.4% commenced prior to 2000 and, surprisingly, 11.6% indicated that they had commenced during 2003 or 2004. Of the 200 who commenced during 2003-04, 36% were in surgery, 27% in adult medicine, 8% in general practice, 5.5% in anaesthesia and a further 5% in emergency medicine. The remaining 18.5% were spread across 10 other specialties.
- By 2004, the majority (75%) of general practice respondents who were still in vocational training in 2004 were in advanced training as were the majority (73.9%) of trainees in the other specialist training programs.

General practice rural training pathway

- In total 149/158 (94.3%) general practice trainees addressed the question about enrolment in the rural training pathway in 2004, and of these respondents 29.5% were so enrolled.
- A significant level of agreement was observed in the Wave 1 and Wave 2 responses of the 122 general practice trainees who answered the rural training pathway question in both 2002 and 2004 (Kappa 0.7, $p < 0.001$), thereby indicating little change in and out of enrolment in the rural training pathway among respondents.

Main location of vocational training experiences, 2002 and 2004

State/Territory of vocational training, 2002 and 2004

- Little change was observed in the past two years in the State/Territory profile of Wave 2 respondents still in vocational training in 2004, apart for a slight increase in the proportion of doctors gaining training experiences overseas.

Geographic location of vocational training, 2002 and 2004

- In total, 39.3% of respondents indicated that the main geographic location of their training experiences had changed in the previous two years, while for 59.8% it had not changed.
- In total, 572 (33%) trainees provided reasons as to why they had changed the location of their training experiences and these included:
 - six-monthly rotation/attachments;
 - college/compulsory requirement;
 - availability of training position; and
 - availability of part time or job share position.
- Across specialties, there was variation in the proportion of trainees receiving most of their training in a rural or remote location in 2004, with figures ranging from 38.2% for general practice trainees to zero for some specialties.
- Between 2002 and 2004 there was a small increase in most specialties, including general practice, in the proportion of trainees receiving most of their training experiences in a rural location with an overall increase from 6.6% in 2002 to 8.4% in 2004.

Perceptions of education and training program, 2002 and 2004

Person from whom trainees receive most of their education and training

- Between 2002 and 2004, there was a significant increase ($p < 0.01$) in the proportion of trainees receiving most of their education and training from consultants (viz., from 73.4% to 80.2%) and a decrease in the proportion receiving it from senior registrars (from 11.8% to 2.7%). Of trainees who indicated receiving most of their education and training from 'other', the most frequently mentioned sources were self-guided learning and hospital teachers.

Satisfaction with education and training supervision

- In 2004, 86.3% of respondents still in vocational training had a formally designated supervisor and this represented an increase of 3.4 percentage points since 2002.
- During this time the proportion of trainees without a formally designated supervisor decreased by 16.5 percentage points and among those who did not know whether they had a supervisor or not, a decrease of 20 percentage points.
- The study found a significant difference ($p < 0.01$) in levels of satisfaction with formal supervision between trainees with a formally designated supervisor and trainees without a supervisor. No differences were observed across specialties in whether respondents had a supervisor or not nor in levels of satisfaction with supervision.

Satisfaction with other features of the education and training program

- A decrease ($p < 0.01$) was observed between the 2002 and 2004 survey in the proportion of trainees satisfied or very satisfied with the 'overall' training that they were receiving, respectively, from 72.5% to 64.9%.
- Little change was observed in levels of satisfaction between the 2002 and 2004 surveys with three of the selected features of respondent's education and training program (viz., formal supervision, quality of formal education, and time and support to participate in formal educational activities). Overall ratings with these features of their education and training program remained reasonably low with the proportion of trainees satisfied and very satisfied in 2004 ranging from 50.8% to 62.1%.

- In 2002 only 34.2% of Wave 2 respondents were satisfied or very satisfied with time and support to develop skills in teaching and/or research. By the 2004 survey this figure had increased to 40% ($p < 0.01$).
- In 2004, Wave 2 survey respondents were asked to rate their satisfaction with access to formal educational activities. This question was not asked in 2002 and was included in 2004 because of the importance ascribed to it by Wave 1 respondents. In total, 60.4% of respondents were satisfied or very satisfied with access to formal educational activities and among specialties there was significant variation in satisfaction levels ($p < 0.01$). For example, a greater than average proportion of general practice and radiology trainees were satisfied, while a lower than average proportion of trainees in surgery and obstetrics and gynaecology were satisfied. No differences were observed based on main State/Territory or urban/rural location of vocational training experiences.

Short-term career plans (next 2 years), 2002 and 2004

- Of the 1,576 doctors who thought that they would complete their current training program within the next three years in 2002, 53.6% (836) still planned to finish within 2 years in 2004, and 46.4% (731) did not think that they would complete the program within this timeframe.
- Of 375 doctors who thought that they would commence practising as qualified specialists within the next three years in 2002, 61.6% (231) still planned to begin practising within the next 2 years in 2004, and 38.4% (144) did not think that they would commence practising within this timeframe.
- Of 405 doctors who expected to gain work experience overseas within the next three years in 2002, 31.6% (128) still planned to do this in the 2 two years in 2004, and 68.4% (277), either did not think that they would achieve this within this timeframe, or no longer held these plans.
- Of 228 doctors who in 2002 thought that they would commence a higher degree within the next three years, 21.9% (50) still planned to do this in the next 2 years in 2004, and 78.1% (178), either did not think that they would achieve this within this timeframe, or no longer held these plans.
- Of 56 doctors who in 2002 thought that they would change to another training program within the next three years, only 7.1% (4) planned to do this within the next two years in 2004, and 92.9% (52) did not.
- Of 350 doctors who in 2002 thought that they would take time out within the next three years, 30% (105) planned to do this within the next two years in 2004, and 70% (245) did not.
- Of 24 doctors who in 2002 thought that they would drop out of medicine altogether within the next three years, the majority (95.8%) no longer planned to do this within the next two years in 2004.

Long-term career plans (next 3 to 7 years), 2002 and 2004

Type of medical work

- For 58.6% of the 1724 doctors still in vocational training in 2004 who addressed the question about the type of medical work they would most like to do in the long-term in both 2002 and 2004, their intentions were unchanged, while for 41.4% their intentions had changed.
- In 2004, 66.7% of general practice trainees and 8.9% of trainees in the 'other' specialties would most like to be in private clinical practice, 57.2% of 'other' trainees would most like to be working in a mixture of public/private clinical work (11.7% GPET trainees), and

21.8% of 'other' trainees would like a public hospital clinical appointment. In total, 1.4% would like to be predominantly doing research/teaching.

State/Territory of future medical work

- In 2004, 30.9% of doctors still in vocational training planned to work in New South Wales, 29.9% in Victoria, 15.9% in Queensland, 6.8% in South Australia, 7.3% in Western Australia, 2.4% in Tasmania, 1.3% in the Northern Territory, 1.5% in the Australian Capital Territory and 2.9% overseas. Little difference was observed in the distributional profile of these respondents in the previous two years.

Geographic location of future medical work

- In 2004, 68.7% (1,196) of doctors still in vocational training planned to work in a capital city, 16.7% (290) in an 'other urban centre', 10.7% (186) in a rural or remote regional centre, 2.1% (36) in a small rural or remote town and 1.9% (33) were either undecided or planned to work overseas.
- In 2004, 12.8% (222) of doctors still in vocational training planned to work in a rural location in 3 to 7 years.
- For the majority (75.4%) of respondents, their plans about the geographic location of their work were unchanged between the 2002 and 2004 surveys. Of the:
 - 1,172 trainees who in 2002 planned to work in a capital city 87.5% (1,026) remained committed to these plans;
 - 288 who planned to work in an other urban centre, 54.2% (156) still planned to do so; and
 - 214 doctors who in 2002 planned to work in a rural area, 59.4% (127) remained committed to this plan in 2004.
- These findings indicate that 95 trainees, who in 2002 planned to work in an urban location, had by 2004 decided to work in a rural location.

Reasons for wanting to work in chosen location

- In 2004, when asked to rank five sets of potential reasons for choosing to work in their current location, the rankings were as follows:
 1. Family and/or social considerations;
 2. Consideration for my career;
 3. Lifestyle;
 4. Consideration for my partner's career; and
 5. Other.
- No difference was observed with respect to 'family and/or social considerations' based on sex or marital status.
- Female trainees and married trainees ranked 'consideration for my partner's career' more highly than did male trainees and single trainees ($p < 0.01$), while male trainees and single trainees ranked 'consideration for my career' more highly than female trainees and married trainees.
- Single trainees ranked 'lifestyle' more highly than married trainees ($p < 0.01$).
- No differences in ranking were observed based on the State/Territory or geographic location (ie capital city, other urban, rural, remote) location in which the trainee planned to work.

Hours of work - Long-term career plans (next 3 to 7 years), 2002 and 2004

- Between the two survey years, little change was observed in the proportion of trainees planning to work full-time and part-time, with 70% in both years planning to work full-time and 30% part-time.
- In total, 83.5% of doctors still in vocational training in 2004, remained committed to the full-time/part-time work plans they held in 2002. Of the 1,196 doctors who in 2002 planned to work full-time in the long-term, 88% remained committed to these plans and of the 516 who planned to work part-time in 2002, 72.8% remained committed to these plans.
- Between 2002 and 2004, there was a reduction in the proportion of trainees planning to work 45 hours or more per week and an increase in the proportion planning to work less than 40 hours per week, respectively, from 35.8% to 29% and from 42.3% to 48.2%.

PART 5: 2004 SURVEY OF RECENT ENTRANTS TO VOCATIONAL TRAINING

This section provides a 2004 snap-shot of the views of recent entrants to vocational training. Where appropriate it also draws comparisons between the 2002 snap-shot of the views of doctors in vocational training at that time.

Demographic profile

Age

- The age of survey respondents ranged between 25 and 59 years, with an average age of 33.1 years (median 31 years; mode 29 years; SD 6.1). The majority of doctors (72.2%) were under 35 years of age with the largest group (36.7%) aged between 30-34 years. In total, 21% of 2004 survey participants were aged between 35 and 44 years and the remaining 6.9% were aged over 45 years.
- Comparative figures from the 2002 survey were an age range of 23 to 65 years and an average age of 32.5 years (median 31 years, mode 30 years, SD 5.5).

Sex

- Overall, 50.3% (861) of respondents were female and 49.7% (851) were male. Comparative figures from the 2002 survey were 46.5% female, 53.5% male.
- Training programs with the highest proportion of female doctors were RACP-PCHD (66.7%), RANZCOG (66.7%), RANZCP (63.4%), GPET (59.6%) and AFRM (58.8%). Training programs with the lowest representations of female respondents were AFOM (18.8%), JFICM (24.5%), RACMA (25.0%) and RACS (26.9%).

Marital status

- Overall, 64.8% of survey participants were married, 32.7% were single and 2.5% were divorced or separated. A higher percentage of male doctors (66.3%) were partnered compared to female doctors (63.4%). A higher proportion of trainees from the 2004 survey were single, compared with those in the 2002 survey.
- Training programs with a relatively high representation of partnered trainees were AFPHM (88.9%), AFRM (82.4%) and RACMA, (81.3%), while those with lower than average representations were RACS (46.7%), RACP-AMD (48.6%) and AFOM (50.0%).
- Of partnered trainees, 83.6% of male trainees and 95.5% of female trainees were partnered with a professional. Comparative data from the 2002 survey re trainees partnered with a professional, were 82% and 86.2%, respectively.

Dependents

- In 2004, 70.4% of respondents did not have dependent children. This compares with 68.6% of respondents in 2002.
- In 2004, 24.6% of respondents had one to two dependent children and 5% had three or more children. This compares with 26.7% and 4.7%, respectively, in 2002.

Country of citizenship

- In 2004, 85.1% of respondents were Australian citizens, 9.6% were permanent Australian residents and 5.3% (91) were temporary Australian residents. It should be noted that temporary Australian residents were excluded from the 2002 data, but were included in the 2004 analysis.

Place of birth

- In total, 50.1% of 2004 respondents were born in Australia. This compares with 41.1% in 2002.
- In total, 0.3% (n=5) of 2004 respondents identified as being of Aboriginal or Torres Straight Islander descent; the same percentage as in 2002.

- Of 2004 respondents who were born outside Australia, 10.0% were from North East Asia, 9.9% from South East Asia 7.7% from South and Central Asia and 5.9% from the United Kingdom.

Medical background of close relatives

- In 2004, 33.7% of respondents had a close relative/s with a medical background; the same proportion as in 2002.

Rural background

- As in 2002, the questionnaire asked respondents to indicate if they had lived in a rural area for 5 consecutive years or 8 cumulative years with a rural area defined as any location outside a capital city or an urban centre (these centres were defined in the questionnaire). In 2004, 21.2% of respondents had a rural background. The comparative figure in 2002 was 22.8%.
- In total, 22.5% of male respondents and 19.9% of female respondents indicated they had a rural background in 2004. Comparative figures for 2002 were 22.2% and 23.6%, respectively.
- Medical college training programs with relatively high representations of doctors with rural backgrounds were ACD (42.1%), ANZCA (31.0%), RACP-PCHD (27.1%) and RANZCOG (25.4%), while those well below the average were JFICM (8.5%), RANZCR (10.6%), RANZCO (10.3%) and AFOM (12.5%).
- Of note was the relatively low representation of GPET respondents with a rural background in 2004 compared with their representation among GPET respondents in 2002 (viz., 21.1% in 2004 and 27.6% in 2002).

Educational profile

Year completed medical degree

- In total, 38.2% of doctors completed their basic medical degree between 1969 and 1998, while 10.5% graduated in 1999, 17.7% in 2000, 23.1% in 2001, 10.1% in 2002 and 0.4% in 2003.
- A total of 89.6% of recent entrants to vocational training completed their medical degree by the age of 29 years, with 53.7% doing so before the age of 24, and 35.9% between the age of 25-29 years.

Medical school

- Overall, 78.1% of doctors graduated from an Australian medical school, while 21.9% graduated from an international medical school. Of Australian graduates, 17.6% were from the University of Queensland, 14.8% from the University of Sydney, 14.2% from the University of Melbourne and 12.2% from Monash University, with the remaining 41.2% distributed across the remaining 6 medical schools.
- Of international medical graduates, 29.3% were from Central/ South Asia, 14.7% from the United Kingdom, 11.7% from North Africa/ Middle East, 10.9% from New Zealand and 10.3% from South/ East Europe.
- Of note was the greater representation of international medical graduates in 2004, compared with their representation in 2002, respectively, 21.9% and 14.6%.
- Medical schools with a relatively high representation of female doctors in 2004 were University of Tasmania (63%), University of Newcastle (62.7%), Monash University (56.4%) and Flinders University (56.3%), while those medical schools with lower than average representation of female doctors were University of New South Wales (42.4%), University of Adelaide (46.9%), University of Queensland (47.0%) and University of Melbourne (48.9%).
- In total, 47.6% of international medical graduates were women.

- Medical schools with a relatively high representation of graduates with a rural background were University of Tasmania (44.4%), University of Newcastle (38.8%) and University of Queensland (37.2%). Those with the lowest representation of graduates with a rural background were University of Sydney (4.1%), University of New South Wales (14.9%) and University of Melbourne (14.9%). Only 13% of international medical graduates indicated that they were from a rural background. The comparative figure in 2002 was 21%.
- An examination of the medical school of GPET trainees showed that 32.8% of Flinders Medical School graduates were GPET trainees. Other medical schools with a relatively high representation of GPET trainees were the University of Newcastle, University of Western Australia and University of Queensland.
- Of international medical graduates training in general practice, the highest proportion was from South and Central Asian countries (40.5%). Of those training in an 'other' specialist training program, the largest proportions were from South and Central Asia (23.6%), the United Kingdom (19.4%) and New Zealand (15.3%).

Rural scholarship/ cadetship

- In 2004, 12.2% of recent entrants to vocational training received assistance through a rural scholarship, cadetship or other type of rural award. Overall, 3.9% had received a John Flynn Rural Scholarship, 3% had received a Rural Australian Medical Undergraduate Scholarship (RAMUS), 1.5% a rural bonded scholarship, 0.9% assistance with HECS debt and 3.7% some other type of rural award.
- Respondents to the 2004 survey included a higher proportion of trainees with a rural scholarship/cadetship than respondents to the 2002 survey, respectively, 12.1% and 5.2%.

Participation in rural club/society

- In 2004, 32.0% of trainees were involved with a rural club or society. This was greater than the proportion similarly involved in 2002 (viz., 11.6%).
- In 2004, 33.5% of female doctors and 30.6% of male doctors indicated that they were involved with a rural club/society and an above average representation of doctors aged less than 30 years was observed.
- Overall, 51.1% of doctors with a rural background were involved with a rural club or society. This represented an increase on the 19.3% of rural doctors participating in a rural club or society in 2002.
- As in 2002, a higher proportion of GPET trainees were involved with a rural club/ society or were in receipt of a rural scholarship, as compared with those from the other specialties. In 2004, although a similar proportion of GPET trainees had a scholarship or rural club participation as compared with the 2002 survey, the proportion of trainees from the other specialties with a rural scholarship or rural club involvement was markedly higher than in 2002.

Tertiary qualifications

- Of the 759 (44.3%) doctors with an additional tertiary qualification in 2004, 64.4% held a bachelor's degree, 12.5% held a master's degree, 7.8% held a diploma, 4.2% held a PhD or MD, 3.0% held both a bachelor's and a masters degree, and 0.5% held both a masters degree and a PhD or MD.
- In 2004, 12.2% of recent entrants were undertaking additional tertiary qualifications, with 57.9% of these studying toward a master's degree.
- Recent entrants from RACMA, AFOM, RANZCP, AFPHM and ACD had an above average representation of trainees undertaking tertiary studies, respectively, 75.0%, 68.8%, 44.6%, 44.4%, and 21.1%. Training programs with a relatively low representation were AFRM, ANZCA (2.6%), RANZCOG, 4.8%, ACEM, (6.5%) and RCPA (7.0%).

Financial debt associated medical education and training

- In total, 5.0% of doctors carried no financial debt associated with their education and training program, while 27.5% carried a debt greater than \$20,000.
- Across all years of graduation from medical school, in 2004 there was a concentration in levels of debt below \$10,000 and over \$20,000.
- A comparatively high proportion of trainees with levels of debt over \$20,000 were training with RACS (57.0%), RANZCO (52.9%) and RACMA (40.0%). On the other hand, a relatively high proportion of trainees in the following programs had debts of less than \$10,000: RANZCR (68.8%) ACEM (68.7%), GPET (61.9%), RANZCOG (59.6%) and RACP-AMD/AFOM/AFPH/AFRM (53.1%).
- The proportion of trainees with debt associated with their medical education and training in 2004 was significantly greater than the proportion with debt in 2002, respectively, 95% and 37.6%.

Career status

- In 2004, the majority (91.1%) of respondents were 'practising as a doctor in a vocational training program', 4.8% were completing an additional specialist qualification, 3.6% were on leave but returning to training and 0.4% had left, or were planning to leave medicine as a career.
- Of all female trainees, 5.0% were on leave, compared with 2.1% of all males.
- Of the 7 trainees who had left or were planning to leave medicine, 6 had chosen to do so as a result of dissatisfaction with medicine.
- These career status findings were similar to those reported in the 2002 survey which found that 89.4% of trainees were practising as a doctor in a vocational training program, 6% were completing an additional specialist qualification, 4.4% were on leave and 0.2% had left medicine.

Factors influencing choice of discipline

- Intrinsic factors ranked most highly as having a positive influence on choice of discipline were appraisal of own skills/aptitudes; interest in helping people; intellectual content of the specialty; appraisal of own domestic circumstances; and perceived job security prospects. (These five factors were also among the top five in 2002)
- Extrinsic factors ranked highly included: atmosphere/work culture typical of the discipline; opportunity to work flexible hours; hours of work typical of the discipline; work experience since graduation; and type of patients typical of the discipline.
- Other influential factors nominated by some respondents as having a positive influence on choice of discipline included: availability of part time training; enjoyment and interest of the discipline; compatibility with rural location; personal experience; and opportunity for volunteer work
- Female doctors were significantly more likely than male doctors to rate highly: hours of work typical of the discipline; opportunity to work flexible hours; and appraisal of own domestic circumstances.
- Male doctors were significantly more likely than female doctors to rate highly: opportunity for procedural work; perceived financial prospects; perceived prestige of the discipline; and perceived careers advancement prospects.
- The following factors were perceived as significantly more important by trainees in nominated training programs when compared with the pooled score for trainees in all programs (except GPET):
 - 'interest in helping people' (RANZCP);
 - 'perceived job security prospects' (RANZCP);

- 'perceived career advancement prospects' (RANZCR);
- 'perceived financial prospects' (ANZCA);
- 'opportunity to work flexible hours' (ACEM and RANZCR)
- 'atmosphere/ work culture typical of the discipline' (RACP- PCHD)
- 'opportunity for procedural work' (ANZCA, ACEM, RANZCOG, RANZCO and RACS);
- 'work experience since graduation' (ACEM and RANZCP);
- 'hours of work typical of the discipline' (RANZCO and RCPA)
- Factors of more importance to GPET trainees, as compared with the pooled score for all other specialties were:
 - hours of work typical of the discipline
 - opportunity to work flexible hours
 - cost of training in the discipline
 - number of years to complete training
 - availability of vocational training placement
 - risk of litigation and associated insurance costs
 - appraisal of own domestic circumstances.
- Factors of more importance to international medical graduates than Australian graduates were:
 - interest in helping people
 - availability of vocational training placement
 - perceived career advancement prospects
 - number of years required to complete training
 - cost of training in the discipline
 - perceived prestige of the discipline
 - work experience since graduation
 - risk of litigation and insurance costs
 - influence of parents/relatives.
- International medical graduates were less likely ($p < 0.01$) to be influenced by:
 - hours of work typical of the discipline
 - influence of consultant/mentors.

Training programs chosen by trainees

- Overall, GPET had the largest representation of trainees (31.5%) followed by RACP-AMD (10.8%), RACS (9.8%), and ACEM (9%)
- Of the 1,712 respondents, 15.2% indicated a subspecialty; a reflection of the relative early career progression of this group.
- Training programs with an above average representation of female doctors (i.e., well above the average of 50.3%) were RACP-PCHD (66.7%), RANZCOG (66.7%), RANZCP (63.4%) and GPET (59.6%), while training programs with a relatively low representation of female doctors were AFOM (18.8%), JFICM (24.5%), RACMA (25.0%), RACS (26.9%) and ANZCA (36.8%)
- Overall, those training programs with a relatively high representation of trainees from a rural background were ACD, ANZCA, RACP-PCHD and RANZCOG, with 42.1%, 31.0%, 27.1% and 25.4% respectively.
- A relatively high representation of trainees in part time or job-share training was observed amongst trainees with AFOM, AFRM, GPET and ACEM, respectively, 18.8%, 18.8%, 12.9% and 8.7%. This compares 6.4% of trainees overall in part time or job share training.

Success in gaining a training position in preferred discipline

- The majority of doctors in vocational training were training in their program of first choice (87.9%), whereas the remaining 12.1% were not.
- Reasons given for not pursuing the first choice discipline included family commitments and lifestyle concerns, lack of availability of training positions, expected work load and working conditions.
- In total, 11.9% of doctors had applied for a discipline other than the one they were currently in. Disciplines featuring among those that were applied for in addition to their current training program were anaesthesia, surgery, emergency medicine, paediatrics, adult medicine, radiology and general practice.
- Reasons given for not training in the other disciplines included not being accepted, acceptance into current program, dissatisfaction with discipline, workload, nature of discipline, and family commitments.

Stage of career when the decision about choice of discipline was made

- Of recent entrants to vocational training, 18.1% chose their training program by the end of medical school, a further 17.8%, 22.1% and 18.9%, respectively, during the intern year, the PGY2 year, and the PGY3 year, with a total of 76.9% having made this decision by the end of PGY3. A further 8.6% of trainees chose their current discipline during PGY4 and 5, and another 5.3% between PGY6 and 10, while 9.3% of doctors made this decision a decade or more after completion of medical school.
- An above average percentage of graduates (i.e., >18.1%) from the University of Newcastle (34.3%), Flinders University (26.6%), University of Sydney (23.5%), Monash University (22.2%), University of Adelaide (21.7%) and University of Melbourne (20.6%), chose their current discipline by the end of medical school.
- A greater than average proportion of trainees from RACP-PCHD (50.0%), RACS (37.3%) and RANZCO (28.9%) chose their current specialty by the end of medical school.

Satisfaction with choice of discipline

- In total, 84.8% of all trainees were either satisfied or very satisfied with their choice of discipline/ training program, which is comparable to 86.4% of trainees in the 2002 survey.
- Training programs with a relatively high proportion of trainees who were satisfied or very satisfied with their choice of discipline were RANZCO, RCPA, RACP-PCHD, ANZCA, ACD, RANZCR and RACMA, respectively, 100.0%, 95.7%, 95.7%, 95.6%, 94.7%, 94.1% and 93.3%. Training programs with a high proportion of dissatisfied or neither satisfied or dissatisfied trainees were AFOM, RACP-AMD and GPET, with 31.3%, 21.3% and 20.3% respectively.
- No significant variation was observed in levels of satisfaction with choice of discipline based on sex, marital status, visa status, urban/rural background, medical school or state.

Vocational training program status and location

- Overall, 87.0% of recent entrants began vocational training in 2003 or 2004 and were therefore in their second or third year of training at the time of being surveyed.
- In total, 50.4% were in basic training, 31.3% in advanced, and 18.3% in 'other' training status.
- Basic training status was more prevalent among trainees from with RACS, RACP-AMD, RANZCP, ANZCA and RACP-PCHD.

- Overall, 33.5% of recent entrants to vocational training were in New South Wales, 26.6% in Victoria, 17.5% in Queensland, 8.3% in South Australia, 8.3% in Western Australia, 1.6% in Tasmania and 0.5% in an 'other' location.
- The main location of training experiences was related to the geographic background of trainees and indicated that the Northern Territory, Tasmania and Queensland all have above average representations of trainees with rural backgrounds, with 48.0%, 37.0% and 33.1%.
- In total, 69.2% of all trainees were receiving most of their training in a capital city, 11.7% in an 'other urban' area, 15.5% in a rural area and 3.6% in a combination of locations. An above average proportion of GPET trainees were located in areas 'other' than capital cities (viz., 68.2% of GPET trainees working outside of a capital city compared with 43.9% of trainees in 'other' programs).
- In total, 39.8% of GPET trainees were training in a rural area, compared with 15.5% of all trainees.

Full time, part time or job share training

- The majority of respondents were training full-time (93.6%), 5.9% were training part-time, and 0.5% were job-sharing.
- In total, 8.8% of female trainees were training part-time or job-sharing, compared with 4% of male trainees.

Main provider of education and training

- Overall, 59% of trainees received most of their training from consultants, 15.1% from senior registrars, 20.4% from general practitioners and 5.6% indicated 'other' sources.
- A relatively high proportion of respondents who graduated from medical school between 2000 and 2003 indicated receiving most of their education from senior registrars.

Formally designated supervisor

- In total 83.3% of respondents reported they did have a formally designated supervisor, 13.4% did not and 3.3% did know whether they had a formal supervisor.
- Trainees from AFOM, AFPHM, RACMA, RCPA, RANZCP, RANZCOG, ANZCA and GPET showed higher indication of having a formally designated supervisor, respectively, 100.0%, 100.0%, 100.0%, 97.2%, 97.0%, 92.1%, 92.1% and 89.0%.
- A relatively high proportion of trainees with the RACP-PCHD (14.6%), ACEM (5.9%), RACS (5.4%) and RACP-AMD (4.9%) did know whether they had a formally designated supervisor or not.

Satisfaction with education and training program

- Overall, 69.6% of doctors in vocational training were satisfied or very satisfied with their education and training program overall, while 10.4% were dissatisfied or very dissatisfied.
- Features of the training programs about which most doctors were satisfied or very satisfied were 'quality of formal educational activities' (66.2%), 'access to formal educational activities' (66.0%) and 'formal supervision' (62.0%). Program features attracting a relatively high proportion of dissatisfied and very dissatisfied responses were 'time and support to develop skills in areas such as research etc' (27.6%) and 'time and support to participate in formal educational activities' (22.6%).
- Doctors aged 30-39 years were less satisfied than older and younger doctors ($p > 0.01$) with the education program overall and with 'formal supervision' and 'quality of formal educational activities'.

- Doctors with a vocational training debt of more than \$10,000 were less satisfied with both 'access to formal educational activities' and the 'quality of formal educational activities' ($p > 0.01$).
- Compared with the pooled score for all trainees in the non-general practice disciplines, trainees with ANZCA and RANZCR indicated greater overall satisfaction with features of their education and training program, while those from RACP-AMD, RACS and RANZCOG were less satisfied overall ($p > 0.01$).
- The most satisfying aspects of vocational training included:
 - flexibility of the training program;
 - good mentoring; and
 - fulfilment of chosen training program.
- The most dissatisfying aspects of vocational training:
 - inadequate/inappropriate training;
 - balancing work and study demands;
 - lack of supervision;
 - high and complex workload;
 - difficulty with internal politics; and
 - high cost of training.

Hours worked

- On average, respondents in 2004 indicated working 47.2 hours per week. The comparative figure indicated by doctors in vocational training in 2002 was 48.4 hours (ie a difference of 1.2 hours per week).
- On average, respondents worked 2.4 hours per week for which they did not receive pay, and they worked 8.9 hours at night. Comparative figures from the 2002 survey were, respectively, 2.6 hours and 8.9 hours.
- Male doctors, on average, worked 2.4 hours more per week than female doctors, viz., 49.2 hours and 46.8 hours respectively. Comparative 2002 figures were 51.3 hours and 44.9 hours.
- The observed decrease in hours worked by doctors in vocational training in 2002 and 2004 applied across age groups.
- In 2004, trainees with RANZCOG, RACS, JFICM and RANZCP worked, on average, the longest hours per week, respectively, 58.1, 57.1, 53.0 and 51.3.

Satisfaction with features of the work environment

Satisfaction with hours worked

- In total, 77% of respondents were satisfied with the number of hours they were working, while 21.5% perceived they were working too many and 1.5% perceived they were working too few hours.
- In 2004, a relatively high proportion of trainees with RANZCOG, RACS and RACP-AMD perceived they were working too many hours, respectively, 47.6%, 35.2% and 31.1%.

Satisfaction with other features of the work environment

- Overall, 65.5% of respondents were satisfied or very satisfied with their working conditions in 2004. Doctor satisfaction with 'support from medical staff in your discipline', 'support from nursing staff' and 'support from allied health staff' were ranked highly, with 76.8%, 69.6% and 68.2%, respectively, of trainees satisfied or very satisfied.
- In total, 25.9% of respondents were dissatisfied with pay, 16.7% with workplace facilities and equipment and 16.5% with recognition for their work.

- Disciplines with above average respondent satisfaction rankings for 'overall satisfaction with working conditions' were RACMA (93.3%), AFPHM (84.6%), RANZCR (80.0%), ACD (78.9%) and RCPA (77.5%). On the other hand, respondents with RACS, RACP-AMD and RANZCOG, ranked this feature relatively poorly with 50.9%, 53.0%, 53.2%, respectively, satisfied or very satisfied.

Satisfaction with time for family, lifestyle and recreation

- In total, only 39.1% of respondents were either satisfied or very satisfied with time available for family, social and recreational activities, and 37.6% were either dissatisfied or very dissatisfied with the remaining 23.3% neither satisfied nor dissatisfied.
- Male respondents were significantly more satisfied with time for family, social and recreational activities than were female respondents.
- Both male and female respondents with dependent children were less satisfied with time for family, social and recreational activities than those without dependent children. In total, 40.8% of male trainees without children were satisfied or very satisfied, with this feature of their work environment, compared with 34.1% of those with children. Similarly, 40.9% of female trainees without children were satisfied or very satisfied, compared with 35.9% of those children.
- Trainees from AFPHM, RCPA, RANZCR and GPET were significantly more satisfied with the time they had for family, social and recreational activities, than trainees from the other programs.

Stress scores associated with training and work

- In total, 48.4% of recent entrants had high to very high stress scores in 2004. The comparative 2002 figure was 55.8%.
- In 2004, female doctors indicated significantly higher stress scores than male doctors.
- An above average proportion of trainees with RANZCP and RANZCOG had average stress scores of high to very high (ie 3 to 4), respectively, 67.3% and 66.1%.
- A positive association was observed between stress scores and number of hours worked ($p > 0.01$). This observation was consistent with that reported in 2002.
- As in 2002, in 2004 a negative association was observed between stress scores and satisfaction with choice of discipline satisfaction, education and training program, working conditions and time for family, social and recreational activities ($p < 0.01$).
- Doctors carrying a debt related to their education and training of more than \$10,000 also showed significantly higher stress scores than those with less debt.

Short- term career plans (next three years)

Complete current training program

- Overall, 89.9% of GPET trainees and 89.6% of other specialist trainees expected to complete their training in the next three years. Not surprisingly, advanced trainees were more likely than basic trainees, in both cases, to hold this expectation.
- These figures were similar to those reported in 2002, when 86.7% of trainees expected to complete their training within three years and 13.3% did not.
- When recent entrants were asked 'in what year do you expect to complete your vocational training?' 51.5% expected to do so by 2007, and 86.4% by 2009.
- Significant variation was observed based on sex, age and training program ($p < 0.01$). Male doctors were more likely than female doctors to expect to complete their training within three years.
- Trainees from ACEM and JFICM were significantly less likely than trainees in the other training programs to expect to complete their training within three years.

- Trainees aged 30-39 at the time of obtaining their medical degree were significantly less likely to expect to complete their training within three years.

Commence practising as a qualified specialist

- In total, 34.3% of respondents expected to commence practising as qualified specialists by 2007, and 69.6% by 2009.
- In total, 50.4% of GPET trainees and 12.7% of other specialist trainees expected to commence practising as qualified specialists in the next three years.
- Advanced trainees from the 'other' specialist training programs were more likely than 'basic' or 'other' trainees to expect to commence practising in the next three years.
- Trainees from AFPHM, GPET, RACMA, AFRM and RANZCR were significantly more likely than trainees in the other programs to expect to commence practising as qualified specialists in the next three years ($p < 0.01$).

Gain work experience overseas

- In total, 17.2% of respondents indicated they intended to gain work experience overseas within the next three years. The comparative figure in 2002 was 24.1%.
- GPET and RACS trainees were significantly less likely than trainees in the other programs to seek to work overseas in the next three years, while ACEM trainees were more likely to.

Do a higher degree

- Overall, 7.7% of respondents in 2004 planned to commence a higher degree during the next three years. The comparative 2002 figure was 12.8%.
- Significant variation based on medical college training program was observed with a relatively higher proportion of RACMA and RACS trainees planning to pursue a higher degree in the next three years.

Take time out

- In total, 18.9% of recent entrants planned to take time out during the next three years; 28.2% of female trainees and 9.4% of male trainees. Comparative figures for 2002 were, respectively, 18.9%; 28.8% and 10.3%.
- Trainees from RANZCP were significantly more likely to plan to take time out than trainees in the other programs ($p < 0.01$).

Change to another vocational training program

- Overall, 4.1% of respondents intended to change to another training program in the next three years. The comparative 2002 figure was 3.0%.

Drop out of medicine altogether

- During the next three years, 1.4% ($n=21$) of recent entrants to vocational training were considering dropping out of medicine altogether. The comparative 2002 figure was also 1.4%.
- Some reasons for considering this option included:
 - high level of stress in existing situation;
 - medico-legal environment;
 - dissatisfaction with working conditions;
 - 'if better opportunity arises'; and
 - preference for other employment or parenthood.

Long- term career plans (3-7 years)

Type of practice

- In 3-7 years' time 40.6% of respondents would prefer to be practising a mixture of public/private clinical work, 30.1% would like to be in private clinical practice and 14.1% would like to be in a public hospital clinical appointment. Comparative 2002 figures were 50.2%, 20.4% and 17.6%, respectively.

- Preference for other medical work options such as salaried clinical practice (1.8%), research and teaching (1.5%), public health medicine (1.6%), medical administration (0.9%) and NGO work (0.4%) were at similar proportions to those indicated by respondents in 2002.
- Overall, 4.1% of respondents were undecided about their long term medical work plans.
- Australian citizens were more likely than permanent residents or temporary residents to indicate a preference for private clinical practice, while permanent and temporary resident trainees were more likely than Australian residents to indicate a preference for a public hospital clinical appointment.
- An above average (viz., 31.4%) proportion of GPET, AFOM and ACD trainees planned to work in a private clinical practice, respectively, 76.7%, 43.8% and 31.6%.
- An above average (viz., 42.4%) of trainees with ANZCA, RACS, RANZCP, RANZCO and RANZCR planned to work in a mixture of public and private clinical work, respectively, 75.7%, 75.0%, 67.7%, 65.8% and 62.2%.
- Overall, 14.7% of recent entrants planned to work in a public hospital clinical appointment, with a high proportion of these trainees from ACEM (55.3%), AFRM (35.3%), RACP-PCHD (31.1%) and RCPA (30.8%)

Hours of work

- In 3-7 years' time, 86.5% of male respondents and 48.5% of female respondents intend to work full time.
- Female doctors planned to work significantly fewer hours than male doctors in the long-term, with 40.5% of female respondents planning to work less than 35 hours per week, compared to 9.6% of male respondents.
- Similarly, 16.9% of male respondents planned to work more than 50 hours per week compared with 4.7% of female respondents.
- Intended hours of worked were examined according to medical college training program and showed that a relatively high proportion of trainees with RACS and JFICM planned to work full time, respectively, 91.6% and 87.2%.
- More than 30% of trainees with AFRM, RANZCP, GPET and ACD planned to work part-time in the long-term.
- In 2004, 69.2% of GPET trainees planned to work less than 40 hours per week, while 49.4% of all respondents had similar plans.
- In 2002, 70.5% of respondents planned to work full-time, and 29.5% planned to work part-time, 63.1% of GPET trainees planned to work less than 40 hours per week, 37.2% of trainees in the other programs had similar plans. In total, 42.7% of all respondents in 2002 planned to work less than 40 hours in the long-term.

Preferred State/Territory

- Overall, 30.8% of respondents would prefer to practise in New South Wales in the long-term, 26.6% in Victoria, 15.7% in Queensland, 8.1% in Western Australia, 7.0% in South Australia, 8.0% in one of the remaining states or in a combination of Australian states and 0.4% (n=6) had no preference.
- This distribution is similar to that obtained in the 2002 survey.
- Other countries and regions listed as preferences by respondents included the United Kingdom and Ireland, New Zealand, Europe, Middle East, Central/ South Asia, North Asia, Pacific Islands and the Americas.
- A relatively high proportion of trainees with a rural background planned to work in Tasmania (48.8%), Queensland (35.2%), Northern Territory (30.0%), another country (27.1%) or two or more Australian states (23.8%).

- A relatively high proportion of doctors with their main training experience in South Australia, Queensland and New South Wales did not plan to practise in that state in the long term.

Preferred geographic location (rural/ urban)

- In total 62.6% of respondents planned to practise in a capital city, 13% in an 'other urban centre', 4.6% in either of these locations in 3-7 years' time and 15.7% planned to work in a rural or remote area.
- Overall, 11.4% of respondents planned to work in a rural regional centre and 4.3% in a small rural or remote town.

Intention to work in a rural location

- Doctors from a rural background were more likely to prefer practice in an 'other urban centre', a rural or remote regional centre, a small rural or remote town or an 'other' location.
- A significant positive association was observed between doctors with rural scholarships/cadetships and intention to work outside of a capital city.
- Trainees involved in a rural club/society, rural clinical school or university rural health department had a significantly higher representation amongst respondents who indicated a preference for rural practise in the long term.
- In 2004, 63.8% of Australian graduates indicated they would prefer to be practising in a capital city, compared with 58.4% of International Medical Graduates (IMGs). Of Australian graduates, 16.5% would prefer to practise in a 'rural or remote regional centre' or 'small rural or remote town'. This compares with 12.8% of IMGs preferring to work in these locations.
- Significantly, 30.3% of GPET trainees indicated a preference for rural practise in the long term.
- Doctors aged 24 years or less at the time of completing their basic medical degree were significantly less likely to prefer to work in a 'capital city or other urban centre' or 'rural or remote regional centre', than were older medical graduates.

Reasons for wanting to practice medicine in a location that you have chosen

- Respondents were asked to rank out of five (1=most important and 5= least important) their reasons for wanting to practise in the specified location. The rankings were as follows:
 1. Family and/or social considerations;
 2. Consideration for my career;
 3. Lifestyle;
 4. Consideration for my partner's career;
 5. Other.
- Female trainees ranked 'consideration for their partner's career' more highly than male trainees, while male trainees ranked 'consideration for their own career', more highly than female trainees ($p < 0.01$).
- International medical graduates ranked 'consideration for their own career' more highly than Australian graduates (respectively, 60.1% and 48.7%).
- In total 78 (4.6%) doctors gave a response other than those offered in the questionnaire. These responses included:
 - 'quality of life and income';
 - preference for 'non- metropolitan style of general practice';
 - 'where I grew up';
 - 'socialising with people of a similar culture';
 - enjoy the lifestyle, eg. city life, coastal life;

- area of need;
- training program locations;
- 'better on-call system'; and
- support networks in a familiar area.

Factors that would influence doctors to take up rural practice

- In total 999 doctors (58.4%) responded to the question 'if you are not considering rural practice, please specify at least one factor that would influence you to take up rural practice'. Among the most frequently mentioned factors were:
 - Increased remuneration
 - Appropriate facilities and resources
 - Access to family needs and entertainment
 - Ability for partner to find work
 - Proximity to home
 - Access to training and education, and
 - Short posting period.

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TERMS OF REFERENCE OF THE AUSTRALIAN MEDICAL WORKFORCE ADVISORY COMMITTEE

The Australian Health Ministers' Advisory Council (AHMAC) established AMWAC to assist with the development of a more strategic focus to medical workforce planning in Australia and advise on national medical workforce matters, including workforce supply, distribution and future requirements.

AMWAC reports to AHMAC, and through AHMAC to the Australian Health Ministers' Conference. AMWAC is one of three AHMAC workforce committees, the other two being the:

- Australian Health Workforce Officials' Committee; and
- Australian Health Workforce Advisory Committee.

The Australian Health Workforce Officials' Committee (AHWOC) provides a forum for reaching agreement on key national level health workforce issues requiring government collaborative action and provides advice on health workforce issues to the Australian Health Ministers' Advisory Council (AHMAC). AHWOC also has a central role to play in co-ordinating the implementation of the recommendations arising from the workforce planning analysis undertaken by AHWAC and AMWAC. AHWOC comprises a nominee from the Australian/State/Territory health departments and the Australian Department of Education, Science and Training. The Australian Health Workforce Advisory Committee fulfils a similar role to AMWAC but with a focus on the nursing, midwifery and allied health workforces.

AMWAC oversees a medical workforce research program which is approved by AHMAC. This specific medical program is complementary to, and linked with, the broader health workforce research agenda overseen for AHMAC by AHWOC.

The terms of reference AMWAC operates under are:

1. To provide advice to the Australian Health Ministers' Advisory Council on a range of medical workforce matters, including:
 - the structure, balance and geographic distribution of the medical workforce in Australia;
 - medical workforce supply and demand; and
 - the number and distribution of education and training places needed to meet future demand as suggested by patterns of supply, population health status, practice developments and changing models of health care.
2. To develop models for describing and predicting future medical workforce requirements, and provide advice on its methodology, including indicators and benchmarks, for use by employing and workforce controlling bodies including governments, specialist medical colleges and tertiary institutions at:
 - national level;
 - state and territory levels; and
 - intra-state and territory.
3. To oversee the establishment and development of data collections concerned with the medical workforce, and analyse and report on those data to assist workforce planning.
4. To work in co-ordination and co-operation with the Australian Health Workforce Officials' Committee (AHWOC) in the assessment of the relationship between medical workforce requirements and new

or alternative workforce structures, profiles and broader health human resources planning requirements.

5. To provide AHMAC with advice as requested on:
 - best practice models of care;
 - future service delivery and workforce developments; and
 - dynamic scenario planning for the medical workforce.
6. To take into account in its planning, and provide advice in its reports, on information on evidence based practice and outcomes.
7. To advise AHMAC on strengths and weaknesses of possible approaches to achieving desirable workforce supply in accordance with quality health care practices.

MEMBERSHIP OF THE AUSTRALIAN MEDICAL WORKFORCE ADVISORY COMMITTEE

Chair

Dr Jeannette Young Chief Health Officer, Queensland Health

Chair of the Australian Health Workforce Officials' Committee

Mr John Ramsay Secretary, Tasmanian Department of Health and Human Services

Nominees of the Australian Health Ministers' Advisory Council

Mr Brett Lennon Assistant Secretary, Health Workforce Branch, Health Services Improvement Division, Department of Health and Ageing

Nominee of the Australian Indigenous Doctors' Association

Mr Romlie Mokak Chief Executive Officer, The Australian Indigenous Doctors' Association

Nominee of the Australian Institute of Health and Welfare

Dr Richard Madden Director, Australian Institute of Health and Welfare

Nominee of the Australian Medical Association

Dr Robyn Mason Secretary General, Australian Medical Association

Nominee of the Australian Medical Council

Dr Joanna Flynn President, Medical Board of Victoria

Nominee of the Australian Vice Chancellors' Committee

Professor Paul Gatenby Dean, Medical School, Australian National University

Nominee of the Committee of Presidents of Medical Colleges

Dr Robin Mortimer Director, Department of Endocrinology, Royal Brisbane and Women's Hospital

Nominee of the Royal Australian College of General Practitioners

Dr Mary Mahoney Queensland

Nominee of the Australian Government Department of Education, Science and Training

Mr Rod Manns Branch Manager, Funding and Student Support
Department of Education, Science and Training

Member with consumer expertise

Assoc. Prof. Merrilyn Walton Adjunct Associate Professor of Ethical Practice
Department of Medical Education, University of Sydney

Member with expertise in rural health care

Dr Sue Page President, Rural Doctors' Association of Australia

Member with expertise in economics, health economics or labour market economics
(awaiting new appointment)

Observers

Dr Peter Brennan	AMWAC Medical Advisor
Dr David Geddis	Ministry of Health, New Zealand
Prof. John Horvath	Chief Medical Officer – Australia Australian Government Department of Health and Ageing
Ms Glenice Taylor	Head, Labour Force and Rural Health Unit, Australian Institute of Health and Welfare
Ms Helen Townley	Executive Officer, Australian Health Workforce Officials' Committee

AMWAC members have been appointed until 31 December 2005.

TERMS OF REFERENCE OF THE AMWAC CAREER CHOICE WORKING PARTY

The AMWAC Career Choice Working Party was established as a subcommittee of AMWAC in 2000 to provide advice to AMWAC on the factors influencing the career choice and workforce participation decisions of postgraduate doctors. In particular, factors influencing choice of discipline, workforce attrition and participation, type of medical practice and location of practice. The project builds on earlier AMWAC work in the area of female participation in the medical workforce and the factors influencing workforce participation.

The two national surveys reported in this document represent Stage 3 of a larger project to monitor the career plans of postgraduate doctors and to identify the factors influencing these plans. These two surveys were administered in September 2004 and involved 1) 'Wave' 2 survey of the 2002 cohort of doctors participating in the AMWAC longitudinal study, and 2) survey of all doctors who had commenced vocational training since 1 October 2002 ('recent entrants to vocational training').

Stage 1 of this project was a review of the literature, which was published by AMWAC in February 2002 titled Career Decision Making by Doctors in their Postgraduate Years- A Literature Review, AMWAC Report 2002.1.

Stage 2 was a national survey of doctors in vocational training and the results of this study were published by AMWAC in 2003 in a report titled Career Decision Making by Doctors in Vocational Training, AMWAC Report 2003.1. The 2002 survey had three objectives, viz., to provide a snapshot of the views of doctors (Australian citizens and permanent residents) in vocational training, to enlist their cooperation in a longitudinal study, and to provide baseline data for the monitoring of factors influencing the career decisions of this cohort of doctors with further surveys in 2004 and 2006.

As with Stages 1 and 2, Stage 3 of this project was undertaken jointly by AMWAC and the Commonwealth Department of Health and Ageing (working through the Medical Training Review Panel). Funding for the project was provided by the Commonwealth Department of Health and Ageing.

The report of findings of the two 2004 Medical Careers Surveys was accepted by AMWAC in December 2005.

MEMBERSHIP OF THE AMWAC CAREER CHOICE WORKING PARTY

Chair

Associate Professor Jill Sewell President, Royal Australasian College of Physicians

Members

Australian Medical Association nominees

Mr Mick Saunders Senior Policy Adviser

Dr Amanda Howard Doctors in Training

Australian Medical Students' Association nominee

Ms Emma Harcourt National Coordinator, AMSA

Committee of Deans of Australasian Medical Schools

Dr Helen Tolhurst Faculty of Health, University of Newcastle

Ms Baldeep Kaur Project Officer, CDAMS

Committee of Presidents of Medical Colleges

Associate Professor Jill Sewell President, Royal Australasian College of Physicians

Commonwealth Department of Health and Ageing nominee

Mr Brenton Rodgers Workforce Distribution Section

Confederation of Postgraduate Medical Education Councils

Dr Greg Keogh Chairman, New South Wales Postgraduate Council

General Practice Education and Training

Mr Rodger Coote General Manager Information & Program Support

General Practice Registrar Association

Dr Vinh Tran

Australian Institute of Health and Welfare

Ms Glenice Taylor Head, Labour Force and Rural Health Unit

National Health Workforce Secretariat

Dr Mary Harris

Ms Larissa Briedis

Former members of the AMWAC Career Choice Working Party

Dr Robert Bain (Secretary General Australian Medical Association);
Dr Peter Brennan (AHMAC medical adviser and Chair of the Working Party from August 2000 to October 2005);
Ms Danielle Brown (Executive Officer, Committee of Deans of Australasian Medical Schools);
Ms Caragh Cassoni (Workforce Distribution Section, Australian Government Department of Health and Ageing)
Ms Monica Pflaum (Workforce Distribution Section, Australian Government Department of Health and Ageing)
Mr Andrew Perry, Mr Nick Brown, Mr Joseph Doyle, and Mr Matthew Holman (Australian Medical Students' Association);
Assoc. Prof. Jane Hall, Director, Centre for Health Economic and Research Evaluation;
Mr Erich Janssen (Australian Medical Association);
Ms Aleata Johnston (Commonwealth Department of Health and Ageing);
Professor Christina Lee (Director, Research Centre for Gender and Health, manager Women's Health Australia)
Dr Cameron Loy (Chair National General Practice Registrars Association);
Professor Robert Sanson-Fisher (Committee of Deans of Australasian Medical Schools);
Ms Beth Slatyer (Commonwealth Department of Health and Ageing);
Ms Faye Stephens (Commonwealth Department of Health and Ageing);
Ms Cathy Wall (Commonwealth Department of Health and Ageing);
Dr Sarah Whitelaw (Doctors in Training, Australian Medical Association);
Dr Simon Willcock (Confederation of Postgraduate Medical Education Councils).

Publications from the project

Publications from the AMWAC Medical Careers project to date have included:

- three AMWAC reports (available at: www.healthworkforce.health.nsw.gov.au):
 - Career Decision Making by Doctors in Their Postgraduate Years – A Literature Review, AMWAC report 2002.1;
 - Career Decision Making by Doctors in Vocational training, AMWAC Report 2003.2 and supporting Statistical Appendix;
 - Career Decision Making by Doctors in Vocational Training: Proceedings of the workshop held to consider the findings of the AMWAC Medical Careers Survey 2002 and possible future directions for vocational training. AMWAC Occasional Paper 2003, Sydney.
- Publications in refereed journals:
 - 'Doctors in vocational training- rural background and rural practice intentions' Australian Journal of Rural Health (2005) 13(2):14-20;
 - 'Factors influencing decisions about the State in which doctors plan to practise: additional results from the AMWAC national survey', Australian Health Review (2005) 29(3):278-284.
 - 'Factors influencing the choice of specialty of Australian medical graduates'. Medical Journal of Australia August (2005) 183 (6):295-300.

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ABBREVIATIONS AND ACRONYMS

ACD	Australasian College of Dermatologists
ACEM	Australasian College of Emergency Medicine
AFPHM	Australasian Faculty of Public Health Medicine
AFOM	Australasian Faculty of Occupational Medicine
AFRM	Australasian Faculty of Rehabilitation Medicine
AHMAC	Australian Health Ministers' Advisory Committee
AHWOC	Australian Health Workforce Officials' Committee
AIDA	Australian Indigenous Doctors Association
AIHW	Australian Institute of Health and Welfare
AMSA	Australian Medical Students' Association
AMWAC	Australian Medical Workforce Advisory Committee
ANZCA	Australian and New Zealand College of Anaesthetists
CDAMS	Committee of Deans of Australasian Medical Schools
GP	General practitioner
GPET	General Practice Education and Training
HECS	Higher Education Contribution Scheme
IMG	International Medical Graduate
JFICM	Joint Faculty of Intensive Care Medicine
MTRP	Medical Training Review Panel
MSOD	Medical Schools Outcomes Database
n	Number
RACMA	Royal Australasian Faculty of Medical Administrators
RACGP	Royal Australian College of General Practitioners
RACP-AMD	Royal Australasian College of Physicians-Adult Medicine Division
RACP-PCHD	Royal Australasian College of Physicians-Paediatrics and Child Health Division
RACS	Royal Australasian College of Surgeons
RAMUS	Rural Australian Medical Undergraduate Scholarships
RANZCO	Royal Australian and New Zealand College of Ophthalmologists
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
RANZCP	Royal Australian and New Zealand College of Psychiatrists
RANZCR	Royal Australian and New Zealand College of Radiologists
RCPA	Royal College of Pathologists of Australasia
RRMA	Rural, Remote, Metropolitan Areas
SD	Standard deviation