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Medical Workforce Expansion in Australia – Commitment and Capacity

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1 Introduction: Medical Workforce Expansion in Australia

1.1 Overview of health system

1. Under Australia's federal system of government, health funding is provided by both the Australian (central) Government and the six State and two Territory governments. The Australian Government funds the two national universal subsidy schemes - the Medicare Benefits Scheme (MBS) which subsidises out of public hospital medical expenses and the Pharmaceutical Benefits Scheme (PBS) which subsidises out of public hospital pharmaceutical expenses. The Australian and State/Territory Governments jointly fund the State-run public hospital system, which provides universally available free hospital care.

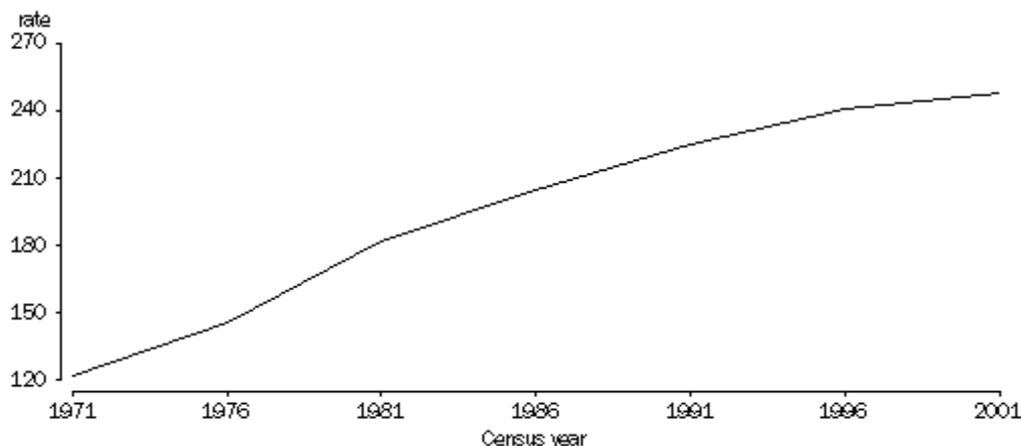
2. The Australian Government has responsibility for university based medical education, general practice (primary care practitioners) and general practice training. Registration and regulation of medical practitioners is a responsibility of the State governments and training of specialists (the non-primary care practitioners) occurs to a very large extent in the State-run public hospitals. On completion of vocational training most medical practitioners in Australia work predominantly in private practice, with their fees fully or partially offset by rebates through Medicare.

1.2 Medical workforce expansion

3. The Australian medical workforce increased from 260 per 100,000 in 1995 to 283 per 100,000 in 2003.²

² Australian Institute of Health and Welfare(AIHW), Medical Labour Force 1999 and AIHW Medical Labour Force 2003

Graph 1 Medical Practitioners per 100,000 population³



(a) Estimated resident population at 30 June each year.

4. Overall, Australian doctor numbers are comparable with health systems in other developed countries. In 2000, Australia had 240 practising physicians per 100,000 population, compared with 200 in the United Kingdom, 210 in Canada, 220 in New Zealand, and 270 in the United States.⁴

5. As with many overseas countries, there has been concern about medical workforce shortages in Australia. Declining average working hours of doctors and increasing demand for medical services have impacted on the availability of medical practitioners. Average weekly working hours for clinicians fell from 48 in 1997 to 44.6 in 2003, a decline of 3.4 hours or about 7%.⁵ This represented a decrease in clinical medical workforce availability equivalent to 3,130 doctors or about 500 per year. The combined effect of lower working hours and strong demand has been workforce shortages which vary in size across medical disciplines, between the public and private sectors, and geographically.

6. While the Australian Government is undertaking a major expansion of its investment in medical education (see paragraphs 17 to 21) the engagement of overseas trained doctors remains an important short to medium term strategy. Between 1997 and 2003 there was a 55% increase in the number of overseas trained doctors passing Australian Medical Council examinations, a prerequisite for seeking general registration and then applying for permanent residency status.

³ Sources: Australian Bureau of Statistics 1971-2001 Censuses of Population and Housing; ABS Estimated resident populations at 30 June 1971-2001. (From Australian Social Trends 2003 - Health Services: Medical practitioners)

⁴ AIHW Medical Labour Force 1999 and AIHW Medical Labour Force 2003

⁵ AIHW (2004) Medical Labour Force 2002, AIHW cat. No. HWL30. Canberra

1.3 Medical education

8. As in other comparable countries, Australia's medical workforce supply is substantially determined by the number of doctors completing basic medical education programs offered by Australian universities. This in turn dictates the supply of different categories of doctor who complete the various specialist (vocational) training programs offered through specialist medical colleges, including general practice training.

9. Doctors are usually not able to access the Medicare payments system unless they are undertaking vocational training or have obtained fellowship. Having a recognised vocational qualification is also a requirement for credentialing processes, which define the scope of practice each specialist is permitted to perform within the relevant hospital(s).

2 Undergraduate (basic) medical education

2.1 Overview of current arrangements

10. Undergraduate (basic) medical education in Australia is offered by university medical schools as either an undergraduate entry program, primarily accepting students directly from high school or as a graduate entry program, accepting students who have completed undergraduate health, science and other degrees.

11. Medical schools programs are accredited by the Australian Medical Council (AMC). The AMC is a government funded national standards body for medical education and training. There are 15 medical school programs with AMC accreditation, or completing accreditation, and three further schools are due to come online by 2008.

12. A graduate of a medical course accredited by the AMC is eligible for full registration as a medical practitioner in any State or Territory of Australia after completing a one year internship. By assessing the medical schools, the AMC is able to assure the medical registration boards that a medical school's educational program satisfies agreed national guidelines and standards for basic medical education.⁶

13. Among universities, there has been a gradual shift towards postgraduate courses for basic medical education.

Type and duration of basic medical education programs

⁶ Australian Medical Council (2005) *Assessment and accreditation of Medical Schools*. Accessed at <http://www.amc.org.au/accredit.asp>

| University | Course Length |
|---|--|
| The University of Sydney, NSW | 4 years (graduate entry) |
| The Australian National University, ACT | 4 years (graduate entry) |
| The University of Queensland, Qld | 4 years (graduate entry) |
| Griffith University, Qld | 4 years (graduate entry) |
| Flinders University, SA | 4 years (graduate entry) |
| Bond University, WA | 4.6 years |
| The University of Newcastle, NSW | 5 years |
| Monash University, Vic | 5 years |
| The University of New South Wales, NSW | 6 years |
| James Cook University, Qld | 6 years |
| The University of Adelaide, SA | 6 years |
| The University of Tasmania, Tas | 6 years – moving to 5 years in 2005-06 |
| The University of Western Australia, WA | 6 years and 4.5 (graduate entry) |
| The University of Melbourne, Vic | 6 years and 4.5 years (graduate entry) |
| The University of Notre Dame (WA campus) | 4 years (graduate entry) |
| Proposed Medical Courses | |
| The University of Western Sydney, NSW | 5 years |
| The University of Notre Dame (NSW campus) | 4 years (graduate entry) |
| The University of Wollongong, NSW | 4 years (graduate entry) |

2.2 Funding arrangements

14. As the great bulk of medical schools are in publicly funded universities, the primary source of funding for the basic medical education they provide is the Australian Government. Most funding is provided under a Commonwealth Grant Scheme for teaching and scholarship. Under these arrangements, the Australian Government provides a contribution towards the cost of an agreed number of places funded by the government and delivered each year. Students also contribute to the cost of their education, through Commonwealth student contributions and loan arrangements.

15. The Australian Government contributes \$AU100,000 per student for a six year medical course and AU\$65,000 for a four year medical course, not including the cost of capital invested in facilities and infrastructure.

16. The Australian Government also supports medical and other health professional education through funding of Rural Clinical Schools (RCS) and University Departments of Rural Health (UDRH). These long-term Australian Government initiatives aim to increase the recruitment of health practitioners to rural Australia, by providing education and clinical training for medical students and professionals in a rural setting, and supporting health professionals practising in rural settings.

2.3 Expansion of undergraduate (basic) medical education

17. A key strategy of the Australian Government in addressing medical workforce shortages has been to increase medical school places in existing medical programs and open new medical schools. Since 2000, the number of publicly funded medical school places across the tertiary education sector has increased by more than 30%. It is projected that, as a result of various initiatives, the number of Australian students completing university medical studies will grow from 1300 in 2005 to 2100 early next decade – an increase of more than 60%.

18. Financial incentives have been provided to medical schools to increase their intake of students from rural areas (where medical workforce shortages have been most evident), and currently 25% of medical students nationally come from such backgrounds. In addition, 20% of first year or commencing medical school places now have bonding requirements which mean that students taking such places need to work for a minimum of six years in a rural or other district of workforce shortage on the completion of their training.

19. Five new medical schools have opened since 2000, located in:

| | |
|------------------------------|---|
| Queensland | James Cook University, Townsville Griffith University, Gold Coast Bond University, Gold Coast (private) |
| Australian Capital Territory | Australian National University, Canberra |
| Western Australia | University of Notre Dame, Fremantle (private) |

20. The Australian Government has also announced its financial support for the establishment of a further three new medical schools in New South Wales at the University of Wollongong; the University of Western Sydney, and the University of Notre Dame Australia, NSW campus.

21. Arrangements introduced by the Australian Government in 2005 allow public medical schools to offer full fee paying places in medicine for Australian students in addition to their publicly funded places. In any year full fee paying places will be capped at 10% of the overall medical places for that year. In addition the two private medical schools recently established at Bond University and the University of Notre Dame, WA can offer an unlimited number of full fee paying places.

3 Post-graduate medical education

3.1 Overview of current arrangements

3.1.1 Prevocational training

22. Postgraduate medical training commences on entry into the workforce. The Medical Training Review Panel, a standing committee established by the Australian Government Minister for Health and Ageing to provide advice on medical education, recommends that the first two postgraduate years (PGY1 and PGY2) be supervised generalist training years. This period is known as prevocational training.

23. Supervision and training is almost entirely provided in public hospitals. Postgraduate Medical Education Councils established in each State and Territory of Australia set the education standards and accredit hospitals employing PGY 1 and 2 doctors within the relevant jurisdiction. The stated aim of PGY 1 and 2 is to consolidate the clinical skills developed during university training and to equip junior doctors with the prerequisite competencies for entry into specialist (or vocational) training programs.

3.1.2 Specialist (vocational) training

24. Specialist training in Australia is provided by twelve medical colleges over 18 vocational training programs, in 70 areas of sub specialty training. Training is based on an apprenticeship model, although some colleges, such as the Royal Australian and New Zealand College of Radiologists, are considering opportunities for alternative models of training including university based training for some course components.

25. To be eligible to access specialist medical training, applicants must have completed an AMC accredited basic medical degree in Australia or New Zealand or successfully completed the AMC examination process for overseas trained doctors. Graduates must also complete a period of up to one year of supervised training or internship. Some training programs require an additional year of generalist training (for example, internal medicine and emergency medicine). In some instances, part or all of relevant prevocational training may be recognised for vocational training purposes. Colleges may also apply additional eligibility criteria, such as a demonstrated interest in that specialty or other assessment of suitability for the specialty.⁷

⁷ Australian Competition & Consumer Commission and Australian Health Workforce Officials' Committee (2005) *Review of Australian specialist medical colleges*.

26. Some specialist training programs, including surgery, physician, emergency medicine, and ophthalmology recruit trainees initially into a basic or undifferentiated training program that can be 2 to 3 years. For these training programs, basic training may be associated with a barrier examination for entry into advanced vocational training.
27. Vocational training programs offered by medical colleges vary in length from 3 years (eg. general practice) to 6 years (eg. neurosurgery). (See Appendix 1)
28. Colleges may offer a single training program such as dermatology or ophthalmology, or a broad range of programs. For example, the Royal Australian College of Physicians, which is a large and complex organisation, offers advanced vocational training in 54 distinct advanced training programs. (See Appendix 2)
29. Almost all specialist vocational training occurs in public sector hospitals, with the exception of general practice training which occurs in community based general practices. Training occurs in defined training positions, programs, departments or institutions approved or accredited by the relevant college. General practice training is funded and accredited through an Australian government funded education body, known as Australian General Practice Education (AGPE).
30. Since 2001, medical vocational training programs in Australia have been accredited by the Australian Medical Council. Any body seeking recognition of training and qualifications offered in a new area of specialist medical practice is subject to review and accreditation of its education and training programs, including continuing professional development programs.⁸ Currently, only medical colleges provide training, although other training providers would be eligible to apply for AMC accreditation should they wish to offer training in a specialist area.
31. The size of training programs varies significantly across colleges. The *Medical Training Review Panel Eighth Report* provides detail on training numbers for 2004. (See Appendix 3).
32. As vocational training is largely provided in public hospitals, the number of places available annually is a function of the number of positions funded by hospitals and/or the state health departments, college accreditation of training hospitals or training posts, and the capacity of the training institutions to provide training. For example, states and territories and the Royal Australasian College of Surgeons are currently negotiating to increase the number of basic and advanced training positions available. To achieve this, funded positions need to be identified by

⁸ Australian Medical Council (undated), Review and accreditation of specialist medical education and training programs, Accessed at <http://www.amc.org.au/review.asp>. 26 September 2005.

health departments and accredited by the college, and the college needs to increase its training capacity to allow the selection of additional trainees into the training program. The availability of relevant clinical experience opportunities and suitable clinical supervisors are considerations in these processes.

3.2 Funding arrangements

33. The principal source of funding for post graduate medical training is government – primarily state and territory governments through the employment of prevocational and specialty trainees in public hospitals. Funding for general practice training is provided by the Australian Government.

34. Trainees contribute to specialty training programs through payment of fees for college membership, training courses and assessment activities. College fellows support training through, for example, in kind or pro bono support of training courses, mentoring and supervision programs.

3.3 Expansion of the postgraduate (vocational) medical education

35. Over the period 1997 to 2004, the total number of first year advanced vocational training places has increased by 30%, to 1,782 positions in 2004. The major areas of increase have been in surgery (an increase of 231 positions) and adult medicine (an increase of 219 trainees), with smaller increases in intensive care, radiodiagnosis, psychiatry, rehabilitation medicine and occupational medicine. [Source: MTRP 8th Report, pp33]

36. From 2004, there was also an increase of one third in general practice training places from 450 to 600, reflecting additional Australian Government funding for this area.

37. The increase in training places is generally based on targets recommended in the Australian Medical Workforce Advisory Committee's (AMWAC) specialty workforce report (see paragraph 61). Overall, 87%⁹ of AMWAC recommendations for additional training places have been fully met.

4 Issues

4.1 Challenges posed by the expansion of medical school places

38. Governments, universities, the medical profession and student organisations have identified a number of challenges associated with expanding the number of medical school places.

⁹ AMWAC(2004), Annual report 2003-04, AMWAC Report 2004.5, Sydney pp17

39. The availability of public funding for new medical school places is a key issue. Government funding decisions need to balance competing demands from existing and proposed medical schools with the demands for other higher education programs and other spending priorities. In recognition of the need to address current and prospective medical workforce shortages, strong financial support from the Australian Government has underpinned the expansion of existing medical schools and the establishment of new schools. In addition to the operational funding provided for each student (see paragraphs 14 - 15), the availability of infrastructure funding has also been important. The Australian Government has provided infrastructure funding and support for the establishment of the four new public university medical schools that have opened since 2000, and has committed a total of up to \$AU40 million towards the establishment costs for the three further new medical schools expected to commence by 2008. Universities are also required to contribute funding from their own sources, and state governments have a role to play.

40. With the growth in medical school places, existing university medical schools have had to become more efficient in the use of their capital assets. For example, the 10 Rural Clinical Schools and the 10 University Departments of Rural Health are increasingly being utilised to support new medical places, as an alternative to capital investment in new facilities and infrastructure. Where two or more universities operate in the same location, they have needed to formalise partnerships and actively collaborate to make the best use of resources such as clinical training places, supervisors and training opportunities.

41. A major challenge, particularly for new medical schools, has been to source adequate clinical training places for their students. Stakeholders have raised concerns about access to clinical placements with the growing number of medical and other students from health professional courses. Clinical placements for medical students are organised between the medical schools, hospitals and other health service providers. However, responsibility for determining that adequate suitable clinical placements are made available to these students lies with the Australian Medical Council.

42. The AMC accredits new medical schools and one of the key accreditation standards that must be met and maintained is that students have appropriate exposure to clinical training. The standards specifically require “adequate clinical experience(s) and necessary resources, including sufficient patients and training facilities” and that the “school monitors the fulfilment of the objectives of clinical placements in hospital and community training settings”.

43. In 2004, the AMC considered accreditation reports on three new medical schools which overlapped with other schools - Griffith and Bond Universities in Queensland and the University of Notre Dame in Western Australia. All three institutions have been required to

- undertake a clinical teaching workforce analysis, that considers clinical training in general practice and community settings;
- establish clear agreements with clinical service providers; and
- demonstrate a collaborative approach to the use of resources if two or more institutions were accessing clinical training at the same site.

44. Since all three institutions are still developing and implementing their courses, the AMC has granted accreditation from 2005 to the three new medical schools subject to specific conditions. All three medical schools are subject to further examinations by an AMC accreditation team, a focus of which is to assure them that the development of suitable clinical placements for the new students is proceeding satisfactorily.

45. In recognition of the high cost of the clinical components of medical courses, Australian Government funding for medical school places is at the highest level of any tertiary courses of study.

46. The Australian Government has also provided resources to universities to establish the Rural Clinical Schools network and the University Departments of Rural Health to promote rural and regional medical practice, where the major medical workforce shortages exist. These are long term initiatives which have contributed to an expansion in the availability of clinical training for medical students at a cost of over \$AU220 million since their establishment in 2000.

47. In relation to General Practice training, Australian Government Practice Incentive Program Teaching Incentives provide payments to GPs who provide clinical placements for medical students, thereby facilitating necessary access for students to primary care clinical settings. In 2003-04, \$AU2.6 million was paid by the Government to 1,300 practices, providing almost 53,000 teaching sessions.

48. The limited availability of clinical teaching staff is also an important issue for universities, given the ageing of the medical academic workforce and overall shortage of medical professionals able to fulfil the role of clinical teaching staff. Approaches to resolving this issue include actively recruiting and supporting clinical staff as academics, recruitment of medical academics from

overseas, and employing medical educators in teaching roles to more effectively cover course requirements in teaching areas where clinical knowledge and skills are not essential.

49. New medical schools face the additional challenge of developing curricula. Some have overcome this by purchasing from other established medical schools, including Flinders and Sydney Universities.

4.2 Should current expansion be linked to curriculum change to prepare graduates to meet society's needs?

50. The challenges posed by medical workforce shortages and the recent expansion of medical school places have stimulated interest in ensuring that medical education programs adequately prepare medical graduates for future medical work and training. However, specifically linking the expansion of places to curriculum change is not currently being considered.

51. Issues in ensuring medical education adequately prepares graduates for future work, and subsequent training and development include:

- focussing on the outcomes of education, in particular whether (and when) required competencies are developed, rather than inputs and processes completed;
- ensuring an appropriate balance exists between developing the required clinical knowledge and skills and developing the required professional attributes;
- better preparing graduates for their expected role in managing and treating chronic conditions, which account for 80% of Australia's burden of disease, in an ageing population. This requires a shift away from the traditional focus on acute episodic treatment to community based management of chronic and complex care.
- better preparing graduates for interdisciplinary, team-based approaches to health care delivery;
- ensuring training occurs in a range of training environments to prepare trainees for independent unsupervised practice in a range of settings; and
- encouraging evidence-based practice based on lifelong learning.

4.3 Implications of the lengthening of training

52. Legislation introduced by the Australian Government in 1996 requires, in most instances, doctors to obtain Fellowship of one of the medical colleges, before accessing the Medicare payment

system. By linking Medicare access to the completion of vocational training, this legislation has ensured that doctors obtain sufficient training and support to develop the skills and knowledge for safe and independent professional specialist practice. The legislation ensures that young doctors are not required to undertake tasks for which they are not properly trained. It has made an important contribution to improving the quality of medical care in Australia.

53. Aside from this legislation, medical specialist colleges have historically had the primary role in determining the length of training for their respective specialties in Australia. With the increasing evidence of current or anticipated medical workforce shortages in some specialties, the length of time between commencement of basic medical training and completion of specialty training has received increased attention.

54. This has been given extra impetus because of the focus on the need to improve coordination between the 3 areas of medical training - undergraduate, prevocational and vocational training. The major medical /educational stakeholders have agreed that the separate stages for educating doctors need to be better integrated. There is a broad level of consensus that medical education should be seen as a continuum of basic, prevocational and vocational education and continuing professional development, rather than distinct and separately managed stages.

55. While the length of specialty education and training programs is considered as part of AMC accreditation and reaccreditation processes, there is no mechanism for specifically regulating or testing the appropriateness of the length of the programs. The AMC accreditation requirements consider how well educational and training program management standards are met. Any extension of training subsequent to AMC accreditation would normally be considered as part of AMC annual reporting and reaccreditation requirements, but there is no requirement for such changes to be specifically reviewed or reaccredited before being implemented.

56. Colleges generally consider that the specified period of training they require is necessary to ensure that trainees gain the level of knowledge, skills and clinical experience needed for competent independent and unsupervised specialist practice. As the scope of medical knowledge and practice has expanded or become more complex, longer training has been introduced on the basis that new specialists require additional skills and knowledge to deal with the increasing number of conditions, procedures or treatments encountered in independent practice.

57. The trend towards sub-specialisation has also contributed to the lengthening of some training programs, like surgery and internal medicine, with trainees undertaking an initial period of general

specialty training and further period of subspecialty-specific training before gaining their fellowship.

58. It is important to ensure that longer training periods are not an impediment both to meeting overall community needs for access to services and to making the most efficient use of private and public resources. In this regard various alternatives to the current time-based ‘apprenticeship’ model are being considered within the health profession. For example:

- making some specialty content and training available within basic and prevocational medical education for students who have a clear career preference.
- permitting earlier entry into the workforce with a limited scope of specialty practice (sub-consultants), on the basis that additional training must be completed before permitting the scope of practice to be expanded.
- adopting competency-based approaches, and assessment models, that enable progress to be based on skills acquisition and not time spent training.
- enabling medical practitioners to enter, leave and move between career pathways on the basis of demonstrated competencies (the ‘career escalator’ concept).
- recognition of prior learning that could facilitate movement within and between specialty areas.

59. While there is some agreement on the need to improve the efficiency of the overall training process, including the streamlining of medical education, as yet there is no common view on the most efficacious model or models. It will be important to ensure adequate quality standards when considering options. The medical profession, including medical academics, specialist colleges and other medical organisations, will have a key role in determining the future approach. A more detailed examination of options is required to enable further consideration by the profession, governments, service providers, and other interested parties.

4.4 Determining the ratio of post-graduate to medical school positions

60. Australia’s approach to planning does not include the use of a ratio of post-graduate to medical school positions.

61. The Australian Medical Workforce Advisory Committee (AMWAC) was established in 1995 to provide Government with independent, expert advice on medical workforce planning in

Australia. AMWAC provides recommendations on workforce needs on a profession by profession basis. There is a rolling cycle of review. This workforce information is then used to project and update vocational training number requirements, which in turn feeds back into considerations about undergraduate requirements. From time to time, AMWAC has reviewed supply and demand for the total medical workforce, to estimate overall undergraduate and vocational education and training needs.

62. The current annual number of graduates is less than the available number of first year vocational training places. In 2004, 1,782 first year advanced vocational training places were available, as compared with the 1300 Australian graduates. The available vocational places have by and large been fully taken up, with the gap being met in part by overseas trained doctors who have taken out permanent residency in Australia.

63. However, Australian medical graduate numbers are set to expand to 2,100 by 2011, and strong growth is also occurring in the number of overseas-trained doctors passing the Australian Medical Council examinations. There is a need to ensure that there are sufficient prevocational and vocational training places for these increased numbers of doctors coming through the system.

64. Simultaneously, there needs to be changes to the vocational training arrangements for specialists. While vocational training currently occurs almost exclusively in major public teaching hospitals, service delivery is increasingly occurring in the private sector: in private hospitals, private specialist rooms and other community-based settings. For example, in 2004-05, 45% of all same day separations took place in the private sector. The increasing specialisation in major teaching hospitals and the growth in community based service delivery, including private hospitals and day clinics, narrows the vocational training experience that can be offered in public hospitals.

65. As a result of this shift in clinical practice, current training arrangements will not continue to provide trainees with sufficient diversity. For example, orthopaedic surgery trainees lack exposure to common conditions such as foot problems or shoulder instability which are not often treated in the public sector.

66. To consider this issue in detail, a Medical Specialist Training Steering Committee has been established, chaired by Australia's Chief Medical Officer, Professor John Horvath A.O. The committee is considering the introduction of a new network model for medical specialist training. It will report back to Australian and State Government Health Ministers in the first half of 2006. It is anticipated that this new model will enable vocational trainees to rotate through a range of

settings according to their clinical need- including public hospitals, private hospitals, private practices, and community based practices – whilst maintaining a single employer

67. The benefits of this approach would be:

- Training that reflects the service delivery to the community;
- An improvement in training opportunities and experiences;
- An improvement in standards of care in the new training settings; and
- A revision of college training programs to utilise the learning opportunities of broader based training settings.

68. The Steering Committee is considering the costs and benefits of these new arrangements for medical specialties; implications for public hospital service delivery capacity; and changes that may be required for individual specialty training programs to ensure alignment with changes in the locations of clinical practice and models of service delivery.

69. The Steering Committee has engaged consultants to project over the next 10 years:

- The number of Australian medical school graduates and Australian Medical Council graduates coming through the system;
- The number of additional prevocational and vocational training positions that will be required in public hospitals; and
- The number of new training places which will be required in private settings.

70. This analysis will provide Government with a picture of the requirements for prevocational and vocational places in the medium to long term, in both public and private settings.

Australian Medical Postgraduate Training Programs

| COLLEGE Specialty | Length of vocational training program (years): | | | | TOTAL |
|--|--|-------------------------|----------------------|--|-------|
| | Basic training | Provisional training | Advanced training | Provisional fellowship/elective | |
| ANZCA Anaesthetists | 2 | – | 3 | Up to 1 year NB: included in advanced training | 5 |
| ACD Dermatologists | 2 | – | 2 | 1 | 5 |
| ACEM Emergency Med | (2) ‡ | 1 | 4 | – | 5 |
| RACGP GPs | – | – | 3 | – | 3 |
| RACMA Med Admin | (3) ‡ | – | 3 | – | 3 |
| RANZCOG Obstetrics & Gynaecology | – | – | 4 | 2 | 6 |
| RANZCO Ophthalmologists | 2 | – | 2 | 1 | 5 |
| RCPA Pathologists | – | – | 5 | – | 5 |
| RACP Physicians | 2 (+1) ‡ | – | 3 | – | 5 |
| RANZCP Psychiatrists | 3 | – | 2 | – | 5 |
| RANZCR Radiologists | – | – | 5 | – | 5 |
| RACS Surgery | 2 | – | 4-6 | – | 6-8 |

‡ Training that occurs in PGY 2 or beyond and may occur before formal acceptance onto the training program.

Source: Australian Competition and Consumer Commission and Australian Health Workforce Official's Committee Report to Australian Health Ministers: Review of Australian Specialist Medical Colleges. July 2005.

Areas of medical practice assessed by specialist medical colleges

| College | Training programs | |
|--|--|--|
| Australian and New Zealand College of Anaesthetists | ANAESTHESIA Pain medicine | |
| Australasian College of Dermatologists | DERMATOLOGY | |
| Australasian College for Emergency Medicine | EMERGENCY MEDICINE | |
| Royal Australian College of General Practitioners | GENERAL PRACTICE | |
| Royal Australasian College of Medical Administrators | MEDICAL ADMINISTRATION | |
| Royal Australian and New Zealand College of Obstetricians and Gynaecologists | OBSTETRICS AND GYNAECOLOGY Gynaecological oncology Urogynaecology Obstetric and gynaecological ultrasound | Maternal-foetal medicine Obstetrics and gynaecology Reproductive endocrinology and infertility |
| Royal Australian and New Zealand College of Ophthalmologists | OPHTHALMOLOGY | |
| Royal College of Pathologists of Australasia | PATHOLOGY General pathology Anatomical pathology (including cytopathology and forensic pathology) Clinical chemistry | Genetics Haematology Immunology Microbiology |
| Royal Australasian College of Physicians | ADULT MEDICINE Adult Medicine Division, Royal Australasian College of Physicians General medicine Cardiology Clinical genetics Haematology Immunology and allergy Clinical pharmacology Endocrinology Endocrinology and Clinical Pathology (with RCPA) Gastroenterology and hepatology Geriatric medicine | Haematology (with RCPA) Immunology and Allergy (with RCPA) Infectious diseases Medical oncology Nephrology Neurology Nuclear medicine (with RAZNCR) Palliative Medicine Respiratory Medicine Rheumatology Respiratory and Sleep medicine Sleep medicine |

| College | Training programs |
|---|--|
| | <p>PAEDIATRICS AND CHILD HEALTH Paediatrics and Child Health Division/RACP Community Child Health Clinical genetics Community child health General paediatrics Neonatology and perinatology medicine Paediatric cardiology Paediatric clinical pharmacology Paediatric emergency medicine Paediatric endocrinology Paediatric endocrinology and chemical pathology (with RCPA) Paediatric rehabilitation medicine Paediatric gastroenterology and hepatology Paediatric haematology (with RCPA)</p> <p>Paediatric immunology and allergy (with RCPA) Paediatric infectious diseases Paediatric intensive care medicine Paediatric medical oncology and haematology Paediatric nephrology Paediatric neurology Paediatric nuclear medicine (with RANZCR) Paediatric palliative medicine Paediatric respiratory medicine Paediatric respiratory and sleep medicine Paediatric rheumatology Paediatric sleep medicine Paediatrics and child adolescent psychiatry (with RANZCP)</p> |
| | <p>OCCUPATIONAL MEDICINE Australasian Faculty of Occupational Medicine/RACP</p> |
| | <p>INTENSIVE CARE MEDICINE AND PAEDIATRIC INTENSIVE CARE MEDICINE Joint Faculty of Intensive Care Medicine/Royal Australasian College of Physicians (RACP) and ANZCA</p> |
| | <p>PALLIATIVE MEDICINE Australasian Chapter of Palliative Medicine/RACP</p> |
| | <p>PUBLIC HEALTH MEDICINE Australasian Faculty of Public Health Medicine/RACP</p> |
| | <p>REHABILITATION MEDICINE Australasian Faculty of Rehabilitation Medicine/ RACP</p> |
| | <p>ADDICTIVE MEDICINE Australasian Chapter of Addictive Medicine</p> |
| | <p>SEXUAL HEALTH MEDICINE Australasian Chapter of Sexual Health Medicine</p> |
| Royal Australian and New Zealand College of Psychiatrists | <p>PSYCHIATRY</p> |
| Royal Australian and New Zealand College of Radiologists | <p>RADIOLOGY Diagnostic radiology Diagnostic ultrasound</p> <p>Nuclear medicine Radiation oncology</p> |
| Royal Australasian College of Surgeons | <p>SURGERY General surgery Cardiothoracic surgery Neurosurgery Orthopaedic surgery Otolaryngology. head and neck surgery</p> <p>Paediatric surgery Plastic and reconstructive Surgery Urology Vascular surgery</p> |

Source: AMC Website, <http://www.amc.org.au/ASSESSINGCOLLEGES.pdf>

Vocational training placements 2004

| College | 2004 All trainees |
|--|----------------------|
| Australian and New Zealand College of Anaesthetists | 465 |
| Australasian College of Dermatologists | 61 |
| Australasian College for Emergency Medicine | 471 |
| Intensive Care | 146 |
| Royal Australian College of General Practitioners | 1569 |
| Royal Australasian College of Medical Administrators | 96 |
| Royal Australian and New Zealand College of Radiologists | |
| Radiodiagnosis | 241 |
| Radiation Oncology | 68 |
| Royal Australian and New Zealand College of Obstetricians and Gynaecologists | 292 |
| Royal Australian and New Zealand College of Ophthalmologists* | 105 |
| Royal College of Pathologists of Australia | 273 |
| Royal Australasian College of Physicians | |
| Adult Medicine | 663 |
| Paediatrics | 258 |
| Occupational Medicine | 62 |
| Public Health | 65 |
| Rehabilitation Medicine | 118 |
| Royal Australian and New Zealand College of Psychiatrists | 725 |
| Royal Australasian College of Surgeons | 709 |
| TOTAL | 6387 |

Source: Australian Government 2005, *Medical Training Review Panel, Eight Report, 2004*, p11.

Note: * Trainee numbers disputed by college (this only refers to the College of Ophthalmologists)