

Australian Medical Workforce Advisory Committee

**THE MEDICAL WORKFORCE IN RURAL
AND REMOTE AUSTRALIA**

AMWAC Report 1996.8

September 1996

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ABBREVIATIONS

ACT	Australian Capital Territory
AHMAC	Australian Health Ministers' Advisory Council
AIHW	Australian Institute of Health and Welfare
AMA	Australian Medical Association
AMC	Australian Medical Council
AMWAC	Australian Medical Workforce Advisory Committee
CME	Continuing Medical Education
CURHEV	Co-ordinating Unit for Rural Health Education (Victoria)
DHFS	Department of Health and Family Services (Commonwealth)
ENT	Ear, nose and throat
FTE	Full Time Equivalent
GP	General Practitioner
GPRIP	General Practice Rural Incentives Program
HECS	Higher Education Contribution Scheme
NCEPH	National Centre for Epidemiology and Population Health
NSW	New South Wales
NT	Northern Territory
OMP	Other Medical Practitioner
Qld	Queensland
RACGP	Royal Australian College of General Practitioners
RACOG	Royal Australian College of Obstetricians and Gynaecologists
RACS	Royal Australasian College of Surgeons

RARA	Rural and Remote Areas
RDRN	Rural Doctors Resource Network (New South Wales)
RFDS	Royal Flying Doctor Service
RHSET	Rural Health Support, Education and Training
RHTU	Rural Health Training Units
RMO	Resident Medical Officer
RUSC	Rural Undergraduate Steering Committee
SA	South Australia
Spec	Specialist
Tas	Tasmania
TRD	Temporary Resident Doctor
Vic	Victoria
WA	Western Australia
WACRRM	Western Australian Centre for Remote and Rural Medicine

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TERMS OF REFERENCE OF AMWAC AND THE AMWAC RURAL AND REMOTE AREAS MEDICAL WORKFORCE WORKING PARTY

The Australian Health Ministers' Advisory Council (AHMAC) established the Australian Medical Workforce Advisory Committee (AMWAC) to advise on national medical workforce matters, including workforce supply, distribution and future requirements.

AMWAC held its first meeting in April 1995.

AMWAC Terms of Reference

1. To provide advice to AHMAC on a range of medical workforce matters, including:
 - the structure, balance and geographic distribution of the medical workforce in Australia;
 - the present and required education and training needs as suggested by population health status and practice developments;
 - medical workforce supply and demand;
 - medical workforce financing; and
 - models for describing and predicting future medical workforce requirements.
2. To develop tools for describing and managing medical workforce supply and demand which can be used by employing and workforce controlling bodies including Governments, Learned Colleges and Tertiary Institutions.
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.

AMWAC Rural and Remote Areas Medical Workforce Working Party Terms of Reference

The AMWAC Rural and Remote Areas Medical Workforce Working Party was established as a sub-committee of AMWAC and was asked to provide a report to AMWAC on additional strategies that will promote an adequate supply and appropriate distribution of the medical workforce, both general practitioner and specialist, to the rural and remote areas of Australia.

The Working Party was established in November 1995 and held its first teleconference on 5 December 1995. This report was presented to the September 1996 AMWAC meeting. The report was then presented to the October 1996 meeting of AHMAC.

MEMBERSHIP OF AMWAC

Independent Chairman

Professor John Horvath Physician, Sydney

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The Working Party would also like to acknowledge the assistance provided by Ms Kirsty McEwin from the RDRN in compiling the report; Mr John Harding, Mr Warwick Conn and Ms Anne Broadbent from the Australian Institute of Health and Welfare (AIHW) with data collection and analysis; and Ms Linda Holub and Mr John Anderson from the Commonwealth DHFS, State and Territory health departments, and the Learned Colleges for the provision of information and helpful suggestions.

INTRODUCTION, GUIDING PRINCIPLES AND METHODOLOGY

Introduction

Medical workforce issues have proved to be among the most complicated and difficult health policy issues to resolve. This is particularly the case for communities in the rural and remote areas of Australia, where attracting, and then retaining, an adequate number of general practitioners (GPs) and specialists has long been recognised as a problem.

The Working Party was established because the problem of attracting and retaining an adequate supply of medical practitioners to rural and remote Australia is viewed by most bodies (government, professional and interest) as the single most important medical workforce issue facing the nation (AMA 1995).

Compared with their urban counterparts, many rural residents experience significant problems of inequity with respect to access to, and provision of, health services (AHMAC 1994). However, the diversity of rural communities, ranging from large regional service centres, through coastal towns and inland towns, to small and comparatively isolated communities, means that universal solutions to the difficulties of accessing medical services may not always be possible.

This can be further complicated by the nature of modern medical practice, where because of their small size many rural communities have limited access to specialist services, diagnostic services and to the wide range of services which cater for the needs of specific groups in society such as women, the aged and the disabled.

This in turn has come to mean that rural and remote area GPs are usually required to deal with a wider range, and sometimes greater complexity, of cases, than their urban counterparts. This is particularly observable for GPs in the smaller rural and the remote communities (Britt et al 1993). As a consequence rural GPs generally work longer hours and require a greater range of procedural skills than urban GPs.

Many of the problems and difficulties faced by rural GPs are also faced by resident rural specialists and this issue is discussed at more length in the report.

It should also be stressed that the lack of rural medical practitioners is an international problem and is not just isolated to Australia. The report makes no effort to compare the Australian situation with international experiences, however a summary of international initiatives to encourage rural practice is provided in Appendix C.

Aim and Approach of the Working Party

In preparing this report the Working Party's aim has been to develop additional strategies, for consideration by AMWAC and AHMAC, that will promote an adequate supply and appropriate distribution of the medical workforce, both general practitioner and specialist, to the rural and remote areas of Australia.

The Working Party acknowledges the considerable body of work already undertaken on this issue and as such the purpose of this report is not to revisit previous recent areas of study. The Working Party has taken as given the work of the Rural Undergraduate

Steering Committee (RUSC), the Commonwealth Government's General Practice Rural Incentives Program (GPRIP) and the various State/Territory government programs. It was not considered a function of the Working Party to review the performance of these schemes.

The report prepared by the Working Party aims to provide AMWAC with a description of the current rural medical workforce; a summary of strategies already in place which attempt to alleviate the acknowledged shortfall in rural medical practitioners; and a catalogue of additional strategies that may further reduce this shortfall, which government (Commonwealth, State/Territory and Local), the medical profession, local communities and stakeholders may wish to consider.

Accordingly, the Working Party's work plan has been to:

1. Review the extent of the rural medical practitioner shortfall (using existing data sources)
2. Examine the disincentives to rural medical practice and outline the programs currently in place to encourage rural practice
3. Provide recommendations on additional strategies that may need to be introduced to further reduce the shortfall in rural medical practitioners

In addition, the Working Party has not examined in detail issues surrounding the provision of an adequate Aboriginal health workforce to rural and remote areas; the impact of increasing numbers of female practitioners and their distribution; or the use of telemedicine in rural and remote areas. It was considered more appropriate for these issues to be examined by the workforce committee of the Aboriginal and Torres Strait Islander Health Council, the AMWAC Female Medical Workforce Working Party and the AHMAC Telemedicine Working Party, respectively.

Guiding Principles

The Working Party used the National Rural Health Strategy and its principles as the key guiding principles. In this respect, three principles are especially relevant to medical workforce issues:

- considerations of equity and access to quality health care are foremost in guiding the provision of rural health services
- the provision of rural health services be guided by need as opposed to demand
- rural health care should be based on generalists who have broadly based competencies, with specialist support as required (AHMAC 1994).

For the purposes of this report, rural Australia equates with non-metropolitan areas and as such incorporates major provincial centres, country towns, mining and isolated communities. This definition thereby encompasses remote communities. It is also the same definition of rural adopted by the National Rural Health Strategy (AHMAC 1994).

Similarly, wherever possible data has been interpreted using the rural and remote areas (RARA) classification developed by the Commonwealth Department of Health and Family Services (DHS 1994). The RARA classification provides a means of identifying areas that are specifically urban, rural and remote, which is then useful in assessing

need and targeting programs. The classification divides local government areas into seven groups:

1. Capital city: the cities of Sydney, Melbourne, Brisbane, Adelaide, Perth, Hobart, Darwin and Canberra.
2. Other major urban: non capital city urban centres with a population greater than 80,000 or more, Newcastle, Wollongong, Queanbeyan (as part of Canberra-Queanbeyan), Geelong, Gold Coast-Tweed Heads, Sunshine Coast, Cairns, Toowoomba, Townsville and Launceston.
3. Rural major: these are either statistical local areas with a minimum population of 20,000 in New South Wales and Victoria, 18,000 in Queensland, or 14,000 in the other States and Territories; or urban areas with a density of 30 or more people per square kilometre and a population of at least 10,000 in New South Wales and Victoria, 9,000 in Queensland, or 7,000 in the other States and Territories.
Examples of rural major communities include Albury, Coffs Harbour, Dubbo, Orange, Tamworth in New South Wales; Ballarat, Bendigo, Horsham, Shepparton, Warrnambool in Victoria; Bundaberg, Dalby, Mackay, Rockhampton in Queensland; Mount Gambier, Port Augusta, Whyalla in South Australia; Albany, Bunbury, Geraldton in Western Australia; and Devonport, Wynyard in Tasmania.
4. Rural other: rural communities that are not major or remote, generally they are rural communities that are within a few hundred kilometres of a capital city or major urban centre.
5. Remote major: these are communities that have the same population and population density as major rural communities but are more than a few hundred kilometres from a capital city or are usually separated from other major centres by a significant physical barrier - Broken Hill in New South Wales; Mildura in Victoria; Mount Isa in Queensland; Port Lincoln in South Australia; Carnarvon, Esperance, Kalgoorlie, Port Headland, Roebourne in Western Australia; Alice Springs, Katherine in the Northern Territory.
6. Remote other: communities that are less densely populated than other rural communities, hundreds of kilometres from a major urban centre and are usually separated from other communities by a significant physical barrier.
Examples of remote other communities are the local government areas of Bourke, Cobar, Hay, Lachlan, Walgett, Warren in New South Wales; Dimboola, Omeo, Orbost in Victoria; Barcaldine, Carpentaria, Longreach, Quilpie, Winton in Queensland; Coober Pedy, Lower Eyre Peninsula, Streaky Bay in South Australia; Broome, Coolgardie, Exmouth, Leonora in Western Australia; King Island, Lyell, Zeehan in Tasmania; Bathurst-Melville, Jabiru, Tennant

7. Offshore areas: Creek in the Northern Territory. includes all offshore areas that are not a local government area in their own right, offshore local government areas in their own right have been classified as remote.

Methodology

The approach of the Working Party has been to analyse existing data sources and to seek information from relevant organisations.

In particular, this report should be read in conjunction with the relevant sections of AMWAC Report 1996.1 - Australian Medical Workforce Benchmarks - which provides an estimate of the extent of the rural medical practitioner shortfall and maldistribution within the Australian medical workforce (AMWAC & AIHW 1996a).

The other principle data source used was the AIHWs annual medical labour force survey. This survey summarises national labour force statistics for registered medical practitioners, principally through a survey collected as part of the annual renewal of registration. The survey data used in this report is for 1994. This survey had an 88.9% overall response rate, although Western Australia did not participate in the 1994 survey. Where appropriate the survey included estimates based on previous surveys to overcome the absence of data from Western Australia (AIHW 1996).

EXECUTIVE SUMMARY

Characteristics of the Rural and Remote Areas Medical Workforce

- In 1994, AIHW survey data shows that whilst rural and remote areas accounted for 27.7% of population only 20.8% of primary care practitioners and 11.8% of specialists were located in a rural or remote area
- Over the period 1984-85 to 1994-95, Medicare data shows that primary care practitioner numbers in rural and remote areas have increased by 36%, although their proportion of total providers has remained fairly constant at around 22%
- Medicare data indicates the turnover in rural primary care practitioners has been similar to the turnover in urban areas at around 13% to 14%, but that the turnover in remote areas has been much higher at around 30%
- The recent AMWAC & AIHW report on Australian Medical Workforce Benchmarks estimates that there is a rural and remote area GP shortfall of 445 FTEs (511 actual) and an estimated specialist shortfall of 900 FTEs (although it was noted that additional work was required to quantify the specialist shortfall more accurately to account for visiting services etc)
- In comparison to urban GPs, rural GPs see more patients but see them less often, charge a higher co-payment and work significantly longer hours, including spending more time on call
- Female clinicians are less likely than male clinicians to work in a rural or remote area, 22.5% of male GPs work in a rural or remote area compared to 17% of female GPs and 12.6% of male specialists compared to 7.2% of female specialists
- Doctors trained in the United Kingdom and Ireland are more likely to be working in rural and remote areas, 24.3% compared to 14.4% of Australian qualified doctors and only 11.4% of New Zealand trained clinicians and 11.3% of Asian trained clinicians
- There is a reliance on temporary resident doctors to fill rural and remote areas practitioner shortfalls, especially in Queensland and Western Australia

Current Action To Encourage Rural Medical Practice

- Governments have been concerned for some years about the continued shortfall in rural medical practitioners and have produced a range of incentives to encourage rural medical practice
- Responses to date have tended to target GPs rather than specialists and have focused on training opportunities, continuing medical education, locum support, assistance with establishing/maintaining a practice and student medical school

selection

- Policy action in the specialist area has focussed on increasing rural training positions
- Local government has provided some support but this has tended to be isolated rather than co-ordinated and has usually been based around providing surgeries, houses and cars for GPs on lease arrangements
- Most university medical schools have affirmative entry programs in place for students of rural origin who fail to meet the medical school entry requirement

RECOMMENDATIONS

The Working Party recommends that the following range of additional strategies should be considered by government (Commonwealth, State/Territory and Local), the medical profession, universities and stakeholders.

In making the suggestions the Working Party recognises that some may already be in place in some States/Territories.

The Working Party also recognises that these recommendations could involve governments in considerable financial outlays but consideration of this was outside the brief of the Working Party.

Undergraduate Education

1. The current Rural Undergraduate Steering Committee initiatives to encourage medical school graduates to consider rural practice be continued, and that university Medical Schools and State/Territory governments who have not introduced these initiatives should consider doing so, especially programs aimed at:
 - a. the encouragement of rural high school students to consider a medical career, including Aboriginal students;
 - b. the use of affirmative entry to Medical School for rural high school students;
 - c. the provision of scholarships to assist students of rural origin attend Medical School;
 - d. the provision of scholarships to enable medical students to spend time in a rural community/practice;
 - e. the provision of student financial support by State/Territory health departments in return for a guarantee of a period of rural service after graduation; including consideration of varying the level of support to reflect the degree of commitment;
 - f. the appointment of rural doctors to academic positions and the funding of university departments of rural health;
 - g. exposure to rural health issues in the curriculum; and

- h. develop national guidelines for student support during rural placements, including accommodation and subsistence.
2. University Medical Schools, in association with the university Rural Health Clubs, State/Territory health departments, local government/communities and relevant professional bodies, in each State/Territory organise an annual rural medical practice careers expo to provide medical students with information about rural communities and rural life and to further improve the contact between rural communities and medical students.

Higher Education Contribution Scheme (HECS) Rebate

3. The Commonwealth Government consider providing a HECS rebate to doctors who spend a minimum period of time, possibly two to three years, in a rural or remote location after training.

Better Remuneration

4. The Commonwealth Government examine ways of better remunerating rural and remote medical practitioners in areas of practitioner undersupply, in recognition of the rigours of rural and remote practice.

Female Participation in the Rural and Remote Areas Medical Workforce

5. AMWAC monitor the trends in female participation in the workforce and co-ordinate qualitative research to identify the reasons for the comparative reluctance for rural practice of female practitioners. From this work develop strategies to encourage greater female participation in rural medical practice.

General Practice

6. The Commonwealth Government's initiatives to assist rural and remote general practitioners, including the General Practice Rural Incentives Program, Divisions of General Practice Project Grants Program and the Better Practice Program be continued, subsequent to the outcome of any reviews into their operation.
7. The Commonwealth Government, in consultation with stakeholders, consider adding bonus payments to the General Practice Rural Incentives Program grants if doctors remain in rural practice for a specified period of time.
8. Joint Consultative Committees between specialist Colleges and the RACGP introduce mechanisms to allow the training of rural and remote area general practitioners to upskill them (where appropriate).

Local Government Involvement

9. State/Territory health departments consider the establishment of State/Territory based rural health working groups, comprising State/Territory health department representatives, local government representatives and representatives of consumers and relevant professional bodies, to co-ordinate a greater involvement of local government in reducing the rural medical practitioner shortfall. As an alternative to establishing any new working group it may be preferable to introduce this initiative through existing structures.
10. All rural local government authorities should consider developing local incentive packages for use when a rural practitioner vacancy occurs in their community. Specific areas local government could focus on are assistance with essential infrastructure such as a surgery, housing and a car, and children's education expenses. The development of local incentive packages could be overseen by the Local Government Association (or equivalent) in each State/Territory, with assistance from State/Territory health departments.

Pre-Vocational Training (Interns)

11. State/Territory health departments should give priority to improving the availability of supervision and teaching in rural and regional locations in order to encourage more pre-vocational trainees to spend time in a rural location.

Specialist Practice

12. The specialist Colleges and State/Territory health departments should give priority to establishing appropriate specialist training positions in rural and regional locations. This will require funding of positions and infrastructure by State/Territory health departments and co-operation by the Colleges to recognise and establish these positions.
13. Each specialist College should introduce procedures for early identification of trainees in their training program who are interested in rural practice and provide them with necessary professional support to encourage this interest.
14. The Commonwealth Government consider extending the assistance available through the General Practice Rural Incentives Program for general practitioners to rural specialists.
15. A specialist locum service be introduced in each State/Territory. (Locum services may need to be provided by temporary resident doctors).
16. AMWAC and AIHW consider undertaking a study into the extent of specialist service provision in rural communities, with attention to each of the different methods of service delivery to rural and remote residents highlighted in this report. AHMAC to provide, through AMWAC, all necessary funding to undertake this study.

Nurse Practitioners

17. State/Territory health departments should examine the possibility of developing procedures for using nurse practitioners to fill designated areas of local service need in rural and remote areas.

Better Information

18. State/Territory health departments introduce procedures to conduct exit interviews of rural medical practitioners who leave rural practice to assist themselves, Rural Health Training Units, specialist Colleges and local government/communities with developing improved responses to problems. (Confidentiality issues need to be considered).
19. AMWAC, in consultation with the relevant authorities, consider developing an information booklet outlining current government programs (both Commonwealth and State/Territory) that are available to assist with the recruitment and retention of rural medical practitioners for use by rural communities.

Review

20. AMWAC periodically examine progress on consideration/implementation of these recommendations and report this progress to AHMAC.

DESCRIPTION OF THE RURAL AND REMOTE MEDICAL WORKFORCE

The purpose of this chapter is to provide a brief overview of the main characteristics of the rural and remote medical workforce. Two main data sources are used - the AIHW 1994 Medical Labour Force survey and Medicare data, principally from the recent report on General Practice in Australia (DHFS 1996).

Medical Practitioners in Rural and Remote Areas - Number and Distribution

Whilst rural and remote Australia comprises nearly 28% of the nation's population, Table 1 shows that in 1994 only 20.8% of primary care practitioners and 11.8% of specialists were located in rural and remote areas (AIHW 1996). In 1994-95, Medicare data indicates 21.9% of primary care practitioners were in rural and remote areas and 12.7% of specialists were located in rural and remote areas (DHFS 1996).

Table 1: Australian medical workforce; by major job category and geographic location, 1994

Category	Capital city	Other major urban	Rural major	Rural other	Remote major	Remote other	Total	% rural/remote
Primary care	13,332	2,049	2,213	1,544	124	152	19,414	20.8
Hospital non specialist	4,261	515	317	69	28	17	5,207	8.3
Specialist	12,078	1,598	1,573	160	90	11	15,510	11.8
Specialist in training	2,478	347	32	15	9	0	2,881	1.9
Total clinicians	32,148	4,509	4,135	1,788	251	180	43,011	14.8
% of total clinicians	74.7	10.5	9.6	4.2	0.6	0.4	100.0	14.8
% of 1994 population	63.2	9.1	11.5	13.0	3.2		100.0	27.7

Source: AIHW 1996

Table 2 shows that of the 1,834 (11.8%) of specialists who had their main job in a rural or remote location in 1994 only 101 were in a remote location, with the large majority (85.8%) practising in a major rural location.

Within each specialty there were large variations, the highest levels of rural and remote residency were for public health medicine (30.1%), general pathology (26.8%), general surgery (23.3%), general medicine (19.7%) and geriatric medicine (17.7%). For some specialties no practitioners resided in a rural or remote location.

This variation in distribution across specialties is in some ways not unexpected and occurs for a number of reasons. In the first instance, rural centres need to be large enough to sustain resident specialist services, and usually large enough to sustain more than one resident specialist. In addition this need for a critical mass can be affected by rural residents who may choose to travel to a metropolitan area to receive specialist care.

Secondly, the critical population mass and infrastructure necessary for some specialties is only available in capital cities. Thirdly, there may be no need for a resident specialist because the service is being provided by visiting specialists or by procedural GPs. For these reasons it can also be inappropriate to apply statewide surgeon to population benchmarks, developed by the specialist Colleges, to rural areas.

Table 2: Specialists; by main specialist qualification and geographic location of main job, 1994

Main specialty	Capital city	Other major urban	Rural major	Rural other	Remote major	Remote other	Total	% rural/remote
Internal Medicine								
Cardiology	394	41	16	0	2	0	452	4.0
Clinical Haematology	126	14	6	0	0	0	146	4.1
Clinical Immunology	82	8	3	2	0	0	94	4.8
Clinical Pharmacology	7	5	0	2	0	0	13	11.5
Endocrinology	181	14	1	2	0	0	198	1.5
Gastroenterology	272	44	21	2	0	0	338	6.6
General Medicine	553	89	131	15	11	0	799	19.7
Geriatric Medicine	116	16	28	0	0	0	160	17.7
Infectious Diseases	69	5	0	3	0	0	77	3.9
Medical Oncology	112	11	4	0	0	0	127	3.5
Neurology	217	23	10	2	0	0	252	4.7
Nuclear Medicine	105	8	7	0	0	0	120	6.2
Paediatric Medicine	583	59	88	8	6	0	744	13.7
Renal Medicine	124	20	4	0	3	0	152	4.9
Rheumatology	149	27	7	0	0	0	183	4.1
Thoracic Medicine	185	27	18	0	0	0	230	7.8
Pathology								
General Pathology	117	30	42	5	6	2	201	26.8
Anatomical Pathology	235	19	33	2	0	0	288	11.9
Clinical Chemistry	46	5	0	0	0	0	50	0.0
Cytopathology	14	2	0	0	0	0	15	0.0
Forensic Pathology	21	0	0	0	0	0	21	0.0
Haematology	51	9	1	0	0	0	62	2.4
Immunology	14	0	0	0	0	0	14	0.0
Microbiology	54	6	1	0	0	0	62	2.4

Main specialty	Capital city	Other major urban	Rural major	Rural other	Remote major	Remote other	Total	% rural/remote
Surgery								
General Surgery	735	95	194	39	15	3	1,082	23.3
Cardiothoracic Surgery	83	6	0	0	0	0	89	0.0
Neurosurgery	94	11	1	0	0	0	106	1.4
Orthopaedic Surgery	495	84	94	0	2	0	675	14.2
Paediatric Surgery	58	6	0	0	0	0	64	0.0
Plastic Surgery	185	17	3	2	2	0	208	2.9
Urology	148	34	30	0	0	0	212	14.1
Vascular Surgery	62	9	3	0	0	0	75	4.0
Other Specialties								
Anaesthesia	1,390	204	224	12	12	2	1,844	13.5
Dermatology	228	31	13	3	2	0	277	6.5
Diagnostic Radiology	713	133	133	11	2	0	991	14.6
Emergency Medicine	93	22	9	0	0	0	123	7.3
Intensive Care	140	16	6	0	0	0	161	3.7
Medical Administration	54	6	7	3	2	0	72	16.6
Obstetrics & Gynaecology	785	123	131	14	11	0	1,064	14.6
Occupational Medicine	220	19	25	9	0	2	274	13.1
Ophthalmology	531	59	84	6	5	0	684	13.8
Otolaryngology (ENT)	235	37	43	2	5	0	322	15.3
Psychiatry	1,681	168	125	18	6	0	1,999	7.5
Public Health Medicine	25	3	6	2	3	2	40	30.1
Radiation Oncology	117	14	3	0	0	0	134	2.2
Rehabilitation Medicine	153	19	10	2	0	2	186	7.3
Other	26	2	0	0	0	0	28	0.0
TOTAL	12,078	1,598	1,573	160	90	11	15,510	11.8
% of total	77.88	10.30	10.14	1.03	0.58	0.07	100	11.8

(a) Victoria includes specialist in training in specialist
Source: AIHW 1996

Table 3 shows, using Medicare data (and therefore excluding any hospital salaried providers such as those in the remote areas of Western Australia and the Northern Territory), that over the past ten years the number of full time equivalent primary care providers in rural and remote areas has increased by 36% from 2,546 to 3,479. The

proportion of rural and remote primary care practitioners has remained fairly steady at around 22% of total Medicare primary care providers, although the trend is downwards.

Table 3: Medicare non specialist medical practitioners, full time equivalent; by geographic location, 1984-85 to 1994-95

Year	Total	Capital city		Other major urban		Rural/remote	
	Providers	Providers	%	Providers	%	Providers	%
1984-85	10,393	7,039	67.8	808	7.7	2,546	24.5
1985-86	10,923	7,423	68.0	848	7.7	2,652	24.3
1986-87	11,527	7,886	68.4	909	7.9	2,732	23.7
1987-88	12,155	8,348	68.7	951	7.8	2,856	23.5
1988-89	12,595	8,632	68.5	992	7.9	2,971	23.6
1989-90	13,038	8,982	69.0	1,036	7.9	3,020	23.1
1990-91	13,496	9,323	69.1	1,055	7.8	3,118	23.1
1991-92	14,082	9,782	69.4	1,093	7.8	3,207	22.8
1992-93	14,687	10,211	69.5	1,144	7.8	3,332	22.7
1993-94	15,266	10,647	69.8	1,194	7.8	3,425	22.4
1994-95	15,636	10,930	70.0	1,227	7.8	3,479	22.2
% increase	50.4	55.3	-	51.9	-	36.6	-

Source: DHFS 1996

The Current Shortage of Rural Medical Practitioners

The report Australian Medical Workforce Benchmarks highlights the degree of maldistribution in the Australian medical workforce (AMWAC & AIHW 1996). The report estimates the current shortfall in rural GPs to be 445 FTEs (511 actual), distributed as shown in Table 4.

Table 4: Estimated rural general practitioner shortfall; by State/Territory, 1994

State/Territory	Shortfall (FTEs)	Statistical subdivisions with the greatest shortfall
New South Wales	163	Clarence, Far West, Hastings, Hunter (rural), Lachlan, Macquarie, Murray-Darling, Murrumbidgee, Northern Slopes, Southern Tablelands
Victoria	83	Ballarat, Gippsland Lakes, Mildura, Northern Loddon-Campese, Shepparton, West Gippsland, Wimmera
Queensland	102	Darling Downs, Far North, Fitzroy, North West, Rockhampton, Wide Bay-Burnett
South Australia	28	Far North, Flinders Ranges, Pirie, Whyalla
Western Australia	41	Dale, Greenough River, Lefroy
Tasmania	16	Burnie-Devonport
Northern Territory	12	

Source: AMWAC & AIHW 1996

The AMWAC & AIHW study also found that in comparison to urban GPs, rural GPs see more patients but see them less often, charged a higher co-payment, and worked significantly longer hours. A higher percentage of rural GPs work 40 hours per week or more (71% of rural GPs, 75% of remote GPs; compared to 61% of capital city GPs). Rural and remote area GPs also spend much more time on call. A greater proportion of a rural and remote GPs time is spent providing Aboriginal health services (see Table 5).

On the other hand, Table 5 shows that the Medicare earnings in rural and remote areas are not that much different to the earnings in urban areas. It is recognised that in many instances, but not all, rural and remote GPs are able to earn additional income through fee for service payments for work as hospital visiting medical officers.

Table 5: Characteristics of the primary care practitioner workload, 1994

Characteristic	Capital city	Other major urban	Rural major	Rural other	Remote
Average % co-payment (a)	7.5	7.3	12.2	11.3	19.5
Average consultations per patient	6.8	6.4	5.4	5.6	4.5
Average ASWPE per FTE GP/OMP	982	1,078	1,230	1,164	1,362
Estimated average FTE income - 1 (b)	\$173,359	\$178,779	\$179,974	\$175,208	\$176,878
Estimated average FTE income - 2 (c)	\$129,212	\$133,251	\$134,142	\$130,590	\$131,835
Average total hours worked	43.5	45.0	48.0	50.9	53.7
Average clinical hours worked	41.1	42.0	43.8	46.7	46.8
Average hours on call not worked	33.0	30.4	34.0	48.2	51.1
Per cent of practitioners on call	19.7	31.4	47.6	41.7	56.6
Per cent working full time (40 hrs+)	64.7	68.7	72.6	77.9	83.7
Percentage of time worked in:					
private rooms	93.3	92.7	94.6	96.8	78.4
hospitals	1.6	2.3	2.3	0.1	5.6
Aboriginal health services	0.1	0.3	0.2	0.8	7.1

(a) defined as fees charged less benefits paid as a percentage of benefit paid.

(b) based on a Medicare level B consultation fee of \$24.15, this multiplies the doctor fee charged by average consultations by average adjusted standard whole patient equivalent (ASWPE). This is indicative only. Any different base fee will show a similar income pattern by geographic class.

(c) same calculation as (b) but using an average Medicare fee of \$18.

Source: AMWAC & AIHW 1996 and AIHW 1996

It is more difficult to assess the extent of the shortfall in rural resident specialists. In part this is hampered by the lack of definitive data on the use of specialist services by rural residents and as such the need to make some assumptions about usage. Table 6 illustrates that it is possible to identify ten different pathways rural residents can take when accessing specialist services and some of these occasions of service can be difficult to quantify from existing data sources.

Table 6: Pathways to specialist services

1.	The GP renders the care him/herself. This occurs when: <ul style="list-style-type: none">- the emotional, social, physical or economic cost of seeking distant care is too great;- the GP feels confident by reason of training and/or experience to render the care; or- the patient consents to the care being delivered in this manner.
2.	The GP renders the care her/himself with the aid of telephone advice from a specialist.
3.	The patient travels to a specialists' rooms in a capital city, other major urban centre or a major rural centre.
4.	The patient is transferred by ambulance to a secondary or tertiary centre. In this situation the escort may be provided by ambulance officers, registered nurses or rural medical practitioners.
5.	The patient is aeromedically evacuated to see a specialist. This occurs in four ways: <ul style="list-style-type: none">- the patient is flown out by commercial or charter aircraft with nurse or rural medical escort;- the patient is flown out by dedicated aircraft with ambulance officer escort; or- the patient is medically evacuated by an intensive care team in an "aerial ICU" for either neonatal retrievals and adult/older child retrievals.
6.	The patient is flown on a commercial flight to see a specialist. This occurs when: <ul style="list-style-type: none">- the condition is urgent but not an emergency;- the patient's physical conditions does not permit ground transport;- in some States when the distance is too great or other conditions render road transport impractical; or- the patient has the financial means to pursue this option.
7.	The specialist conducts a regular or intermittent visiting clinic in a rural centre(s), for example the Central West Queensland Visiting Medical Specialist Scheme.
8.	Very occasionally, a specialist team will fly out to the patient to render definitive or temporising care, prior to transfer to a major centre. This occurs in a number of unusual situations, where the risk of transfer or the time it would take is too great. Examples include infarcting organs; vascular catastrophes, for example abdominal aortic aneurism; intracranial catastrophes; and temporising surgery for multiple trauma.
9.	Distant consultation using communications technology. This includes video conference and teleradiology.
10.	Pathology - effectively, when a part of the patient is sent to a specialist.

In their report on rural specialist services Gadiel and Ridoutt found that, after standardising for age, rural and remote area residents were receiving a much lower provision of specialist services than people in capital cities and other major urban centres (Gadiel and Ridoutt 1994). The results of the study were quantified in terms of relative endowment and indicated considerable shortages in rural and remote areas in all States. These results are summarised in Table 7 and show that the disparities are particularly marked for Queensland, South Australia, Western Australia and Tasmania.

Table 7: Specialist supply, relative endowment; by State/Territory and geographic location, 1992-93

State/Territory	Capital city	Other major urban	Rural	Remote	Total
NSW + ACT	130	107	57	12	109
Victoria	122	122	42	64	102
Queensland	125	135	27	5	93
SA + NT	134	na	12	11	98
Western Australia	103	na	24	9	80
Tasmania	125	na	29	na	83
AUSTRALIA	124	120	40	15	100

The index is the ratio of Australian total Medicare eligible population per FTE doctor to the local population per FTE doctor by 100 (100 = the standard); na - not applicable

Source: Gadiel and Ridoutt 1994

The AMWAC & AIHW report Australian Medical Workforce Benchmarks estimated a shortfall in rural specialist of at least 900 FTEs, although it was noted that additional work was needed in this area to quantify the shortfall more accurately, including quantifying the provision of visiting specialist services. In calculating the figure of 900 FTEs an allowance was made for specialist procedural work being conducted by GPs and substitute services being provided in remote areas by nurse practitioners and Aboriginal health workers. The earlier discussion on critical population mass and sustainable practice must also be borne in mind when considering this estimate. If the same distribution of specialists in rural areas as in urban areas was used the shortage was calculated at an estimated 2,163 FTEs (AMWAC & AIHW 1996a).

The Turnover in Rural General Practitioners

Medicare data indicates that since 1987 the annual turnover of rural area GPs and urban GPs has been fairly similar and constant at around 14% for rural areas and 13% for urban areas. For remote areas the annual turnover has been around 30%. In addition remote areas has shown a trend to increased turnover in recent years (DHFS 1996).

Age and Gender Profile

Table 8 indicates that female clinicians have a greater preference for work in an urban environment, with only 12% of female clinicians practising in a rural or remote location. In comparison, 15.7% of male clinicians work in a rural or remote location. The breakdown in the main job categories is:

- 22.5% of male GPs compared to 17% of female GPs;
- 12.6% of male specialists compared to 7.2% of female specialists; and
- 2% of male specialists in training compared to 1.8% female.

Table 8: Distribution of clinicians; by major job category, gender and geographic location, 1994

Main job	Capital city	Other major urban	Rural major	Rural other	Remote	%rural/remote
Primary care						
% male	66.5	11.0	12.0	8.9	1.6	22.5
% female	73.4	9.6	10.0	5.8	1.2	17.0
Hospital non specialist						
% male	81.3	10.0		8.7		8.7
% female	82.7	9.8		7.5		7.5
Specialist						
% male	76.4	11.0	10.9	1.0	0.7	12.6
% female	86.9	5.9	5.6	1.2	0.3	7.2
Specialist in training						
% male	84.5	13.5		2.0		2.0
% female	89.5	8.6		1.9		1.9
All clinicians						
% male	73.3	11.1	10.3	4.4	1.0	15.7
% population	63.2	8.3	11.5	13.5	3.4	28.4
% female	79.0	8.8	7.7	3.5	0.9	12.1
% population	64.1	8.4	11.6	12.8	3.0	27.4

Population is based on Australian Bureau of Statistics estimated resident population at 30 June 1994.
Source: AIHW 1996

Table 9 shows that specialists working in a main job in rural and remote areas were on average two to three years older than their capital city or major urban counterparts. GPs were roughly of a similar average age, although GPs in remote areas were younger on average.

Table 9: Clinicians, average age (years); by major job category and geographic location, 1994

Clinician type	Capital city	Other major urban	Rural major	Rural other	Remote major	Remote other
Primary care	45.6	45.3	45.1	45.5	41.8	42.9
Hospital non specialists	29.8	29.4	32.9	33.7	36.3	33.1
Specialists	48.8	47.7	49.1	52.2	52.4	48.0
Specialists in training	31.6	32.5	35.6	31.7	33.3	0.0
All clinicians	43.7	43.5	45.7	45.6	44.0	42.0

Excludes Western Australia which did not provide data
Source: AIHW 1996

Workplace of Immigrant Doctors

Table 10 shows that in 1994 doctors trained in the United Kingdom and Ireland were more likely than any other to practise in a rural or remote area, with 24.3% practising in rural and remote areas compared to 14.8% of the medical workforce as a whole. 14.4% of Australian qualified doctors practise in rural and remote areas. Practising clinicians who gained their qualifications in New Zealand, South Africa or Asia are less likely to practise in rural and remote areas.

Table 10: Practising clinicians; by country of first qualification and geographic location of main job, 1994

Country of first qualification	Capital city	Other major urban	Rural major	Rural other	Remote major	Remote other	Total	%rural/remote
Australia								
Primary care	10,235	1,495	1,770	1,243	96	117	14,957	21.5
Hospital non spec.	3,734	458	275	52	13	15	4,548	7.8
Specialist	9,947	1,230	1,194	103	61	6	12,541	10.9
Spec. in training	2,259	271	24	9	2	0	2,564	1.3
Total	26,175	3,454	3,263	1,407	172	138	34,609	14.4
New Zealand								
Primary care	162	33	20	10	3	3	231	15.7
Hospital non spec.	104	9	7	5	3	0	128	11.5
Specialist	317	67	33	3	5	2	425	9.9
Spec. in training	36	12	1	0	0	0	50	2.9
Total	619	121	61	18	11	4	834	11.4
United Kingdom & Ireland								
Primary care	877	289	274	182	13	25	1,659	29.7
Hospital non spec.	108	36	17	7	3	0	172	16.1
Specialist	839	184	223	23	4	2	1,275	19.8
Spec. in training	74	37	1	6	2	0	121	7.9
Total	1,898	546	516	219	22	26	3,227	24.3
South Africa								
Primary care	218	37	28	20	0	0	304	16.0
Hospital non spec.	18	1	5	0	1	0	26	26.8
Specialist	254	24	28	0	0	0	305	9.1
Spec. in training	22	6	3	0	0	0	31	8.5
Total	512	68	64	20	1	0	666	12.9

Country of first qualification	Capital city	Other major urban	Rural major	Rural other	Remote major	Remote other	Total	% rural/remote
Asia								
Primary care	1,223	144	72	59	11	3	1,511	9.5
Hospital non spec.	156	6	9	3	6	0	180	9.7
Specialist	532	81	74	26	17	0	730	10.8
Spec. in training	56	10	1	0	0	0	67	2.2
Total	1,966	241	156	89	34	3	2,489	11.3
Other countries								
Primary care	617	51	49	29	1	5	751	11.2
Hospital non spec.	142	4	4	3	1	2	155	6.3
Specialist	188	14	20	4	3	1	231	12.4
Spec. in training	30	12	2	0	4	0	48	4.3
Total	976	81	75	36	10	8	1,185	10.9
TOTAL								
Primary care	13,332	2,049	2,213	1,544	124	152	19,414	20.8
Hospital non spec.	4,262	515	318	69	28	17	5,208	8.3
Specialist	12,076	1,599	1,573	160	90	11	15,508	11.8
Spec. in training	2,477	347	32	15	9	0	2,880	1.9
Total	32,147	4,510	4,135	1,788	250	180	43,010	14.8

Source: AIHW

Origin of Students in Medical Schools

Table 11 shows that there remains a considerable maldistribution in the origin of medical students, with a heavy bias towards students from capital cities. In 1995 there were 688 more medical students than in 1989, with 12.8% of this increase representing students from rural or remote areas. However, there has only been a slight increase in the proportion of students from rural and remote areas, rising from 7.5% of students in 1989 to 7.9% of students in 1995. Significantly, the proportion of female students from rural areas is lower now than it was in 1989; despite the bulk of the increase in total medical student numbers being female.

The origin of medical school students is considered an important issue because overseas studies have indicated that growing up in a rural area is an important factor in going into rural medical practice (see Appendix C). In Australia the RUSC, as part of the Commonwealth General Practice Rural Incentives Program (GPRIP), has been established to assist with rural origin student recruitment and improving the medical school curriculum. How this has been done in each State/Territory is summarised in Appendix A.

Table 11: Students in medical courses; by gender and home geographic location, 1989 and 1995

Year/ Gender	Capital city	Other major urban	Rural major	Rural other	Remote	Total	Total rural/ remote	% rural/ remote
1989								
Male	4,305	253	177	125	21	4,881	323	6.7
Female	3,066	195	153	134	25	3,573	312	8.7
Total	7,371	448	330	259	46	8,454	635	7.5
% female	41.6	43.5	46.4	51.7	54.3	42.3	49.1	8.7
% of total students	87.2	5.3	3.9	3.1	0.5	100	7.5	7.5
1995								
Male	4,256	242	193	142	27	4,860	362	7.5
Female	3,646	275	194	147	20	4,282	361	8.4
Total	7,902	517	387	289	47	9,142	723	7.9
% female	46.1	53.2	50.1	50.9	42.6	46.8	49.9	8.4
% of total students	86.4	5.7	4.2	3.2	0.5	100	7.9	7.9

Source: Department of Employment, Education and Training and Youth Affairs, and AIHW; from AIHW 1996

Temporary Resident Doctors

Temporary resident doctors (TRDs) are used to varying degrees across each of the States to fill particular areas of need, both as private practitioners and within the hospital system.

AMWAC conducted a survey in November 1995 of all State/Territory health departments asking for details of area of need positions. The returns for rural and remote areas are outlined in Table 12.

Table 12: Area of need positions in rural and remote areas; by major job category and State/Territory, 1995

Major job	NSW	Vic	Qld	SA	WA	Tas	NT	Total
GPs	4	8	14		13		5	44
Locums	2	1	49		24		0	76
Specialists	5	1	16		1		3	26
RMOs/ Registrars	6	14	123		3		15	161
RFDS	1	0	1		8		0	10
TOTAL	18	24	203	0	49	6	23	323

Western Australian figures are FTEs.

Source: State/Territory health departments

Key Rural and Remote Medical Workforce Characteristics

In summary the main workforce characteristics which the data highlight are:

1. Maldistribution within the Australian medical workforce; which for rural Australia means a shortage of both resident GPs and specialists.
2. Rural practitioners work longer hours and spend more time on call.
3. On average, the rural and remote workforce is comparatively older than the urban workforce, both in general practice and specialist practice.
4. Female clinicians prefer to practice in a capital city or major urban location.
5. Overseas trained doctors prefer to practice in a capital city or major urban location. This is especially true for doctors from New Zealand, Asia and South Africa.
6. There is a reliance on TRDs to fill rural and remote area shortfalls on a short term basis, particularly in Queensland and Western Australia.

Taken together these characteristics indicate that more needs to be done to alleviate the shortage of rural and remote area resident GPs and specialists.

ATTRACTING AND RETAINING RURAL MEDICAL PRACTITIONERS

The Disincentives to Rural Medical Practice

The difficulties of attracting and retaining medical practitioners to rural and remote areas are well documented (Kamien 1987, Doherty 1988, Kamien and Buttfield 1990, Gill 1992, Harris 1992, Strasser 1992, Brooks 1994, Gadiel and Ridoutt 1994, RUSC 1994, Stocks and Peterson 1994, Hoyal 1995, Kamien 1995, Lochtenberg et al 1995, McEwin 1995, Rosenthal 1995, Holub and Williams 1996).

From the literature review 22 key disincentives are definable and these can be grouped into nine broad categories. The disincentives begin with the image of the rural lifestyle and rural medical practice, and follow through problems associated with undergraduate and postgraduate training to a range of difficulties associated with rural medical practice, including issues surrounding the spouse and/or family. Most of the disincentives to rural practice and locating in a rural area have been defined in terms of GPs, although, generally, they apply to specialist practice as well.

Studies and commentators have attached differing importance to each of the disincentives. The importance of these disincentives on the decisions to locate, and stay, in a rural location is also likely to vary between GPs and specialists.

1. Image of Rural Medical Practice

- lack of exposure to the rural lifestyle
- negative attitudes to rural practice

2. Undergraduate Education

- selection of medical students weighted in favour of metropolitan students
- limited exposure in medical school to rural medicine and rural health issues
- leaving medical school with a lack of skills, and as a result the confidence, to undertake rural practice

3. Postgraduate Training

- lack of training in procedural skills necessary for rural practice
- lack of exposure to rural practice in specialist training programs

4. Professional Isolation

- lack of interaction with professional colleagues
- poor continuing education opportunities and support

5. Time Commitment

- comparatively greater time commitment (long hours, often permanently on call, lack of holidays)
- being a sole practitioner
- lack of locum relief

6. Infrastructure

- poor infrastructure (the surgery, the local hospital, the hospital network)
- poor allied health support and specialist backup
- poor access to a local hospital (including for specialists a lack of access to a private hospital)

7. Financial

- potentially higher establishment costs
- comparatively poor remuneration (especially in terms of hours worked and time spent on call)
- medico legal issues and the cost of medical indemnity insurance
- financial difficulties of moving back to capital cities/or major urban centres

8. Spouse/Family

- limited opportunities for spouses to pursue their careers
- limited choice for children's education

9. The Future of Rural Health Services

- uncertainty about the viability of some rural health services and hospitals and governments' attitudes to rural health

The Attractions of Rural Medical Practice

Less has been written on the attractions of rural medical practice, no doubt because the negative aspects of the issue are more often given prominence. There are of course two aspects to the issue as well - what initially attracts doctors to rural practice and what keeps them there.

Some surveys have been undertaken on this issue and the National Survey of Rural General Practitioners currently being planned by the Centre For Rural Health is likely to add further knowledge to this area when its results are available in 1997.

In 1992 the Gill report on country general practice in South Australia (Gill et al 1992) found that the main attractions of rural practice were:

- the ability to practice the full range of skills
- the country lifestyle/from the country
- attractive working conditions, including access to a hospital

In Strasser's 1992 survey of rural GPs in Victoria (Strasser 1992b) the main attractions were:

- the variety of rural practice
- the country lifestyle
- the ability to provide comprehensive care and continuity of care
- the country is a good place to raise children

In 1994 WACRRM surveyed Western Australian specialists (Smith 1994) and found the key attractions to specialist rural practice were:

- the rural lifestyle
- professional autonomy
- rural upbringing
- income

CURRENT ACTION TO ENCOURAGE RURAL MEDICAL PRACTICE

Governments in Australia have been concerned for some years about the difficulties of recruiting medical practitioners to rural and remote areas and have introduced a range of initiatives aimed at overcoming the disincentives outlined in the previous chapter.

The Commonwealth Government has introduced a number of initiatives to encourage doctors with appropriate skills to practice in areas where their services are required. The GPRIP, which has been phased in gradually over the past three years, has a particular focus on supporting GPs in rural areas through equipment, continuing medical education (CME), locum support, training and remote area grants; and encouraging GPs to rural areas with relocation grants. The GRIP has an allocation of \$15.1 million per year (Holub and Williams 1996).

In 1995 the Commonwealth also commenced seven pilot demonstration projects aimed at improving the delivery of specialist services to rural and remote areas. The pilots will run for two years and test strategies for improved service delivery that arose out of the review of specialist services conducted by Gadiel and Ridoutt in 1994. The Commonwealth has also allocated additional funding for rural/regional specialist training positions.

The Working Party also supports the recent new incentives in the Commonwealth budget, especially the provision of funding to improve the opportunities for undergraduates and graduates to train in rural areas, the funding of six university departments of rural health, the provision of additional funding for locum services, the provision for scholarships to enable medical students to spend time in rural areas, and funding to enable nurse practitioners to gain access to training and support infrastructure.

The respective State/Territory health departments have all helped to address the shortage of rural medical practitioners in some way, although their responses have tended to focus more on GP issues. For example, all States, with the assistance of the Commonwealth, now have locum relief schemes and have established Rural Health Training Units in recognition of the need for more specific training for rural practice.

Likewise, most university medical schools now make positive attempts to recruit students from rural communities and either have, or are, addressing ways in which their curriculum can give greater student exposure to rural practice.

Table 13 summarises what initiatives governments currently have in place to encourage rural medical practice. More detail on each initiative is provided in Appendix A.

Table 13: Summary of current Commonwealth and State/Territory government initiatives to encourage rural medical practice, 1996

Initiative	Com.	NSW	Vic	Qld	SA	WA	Tas	NT
Image of Rural Medical Practice								
Positive promotion of rural practice	X	X	X	X	X	X		
Undergraduate Education								
Selection of rural origin students	X	X		X	X	X	X	
Greater exposure to rural medicine	X	X	X	X	X	X	X	
Financial support for students	X	X	X	X	X	X		
Rural health club(s)	X	X	X		X	X	X	
Postgraduate Training								
Rural health training unit(s)	X	X	X	X	X	X		X
Increased rural based specialist training	X		X		X			
Professional Isolation								
CME	X	X	X	X	X	X	X	X
Professional support	X	X				X		X
Time Commitment								
GP locum relief	X	X	X	X	X	X		X
Specialist locum relief	X					X		
Financial								
Assistance with establishment costs	X							X
Improved GP remuneration	X	X		X				X
Spouse/Family								
Family support	X	X	X		X	X	X	

Note: X indicates some form of assistance is provided; more detail is provided in Appendix A.

An examination of the arrangements in place to attract and retain rural practitioners reveals several points:

1. A clear picture of the impact and success of the programs will only emerge as the programs are evaluated; and it is too early to undertake impact/outcome evaluations of most strategies.
2. Arrangements to date almost exclusively target GPs, yet shortages and similar problems exist for specialists.

3. There is a comparative lack of involvement by local government in assisting with solutions.
4. The characteristics of the rural workforce described in chapter 2 exist despite the variety of incentive arrangements that are already in place to combat some of the acknowledged disincentives to rural practice.

The Working Party discussed why the problem of rural GP and specialist shortages still exists? There could be several reasons for this:

1. It is too early for the existing incentive arrangements to have a lasting positive impact.
2. The incentives are still not great enough and/or appropriately targeted to encourage a significant number of new graduates and/or existing practitioners to consider rural practice and to then remain in rural practice.
3. The incentives are not widely known, especially amongst the oversupplied urban GP workforce.
4. Despite all efforts the situation will never greatly improve beyond the current position because of Australia's highly urbanised lifestyle, the nature of medical training and practice, and the likelihood that the social and cultural disincentives to rural practice will always be difficult to overcome.
5. The perception that rural practice is just too difficult may never be overcome, which in a cruel twist of irony is probably reinforced by rural practitioners highlighting the special nature of rural practice.
6. Greater emphasis needs to be given to retention strategies.
7. To be genuinely effective any incentive arrangements need to be reinforced with simultaneous disincentives, especially to urban general practice.

Without a detailed survey of Australian medical practitioners some of these questions cannot be answered definitively. The forthcoming national survey of GPs by the Centre For Rural Health may be of some assistance in this regard.

The reason the problem of maldistribution continues to exist is a complex combination of all the possibilities suggested above and as a result the current initiatives may not be sufficient to alleviate the shortages. Further strategies, involving all levels of government, the medical profession, and rural stakeholders, need to be considered. The reasons for the rural practitioner shortfall are also likely to differ from town to town and from region to region, and to possibly even vary over time within towns and regions. This reflects the diversity of rural communities and the medical practices and health needs within those communities.

FURTHER STRATEGIES TO ENCOURAGE RURAL MEDICAL PRACTICE

Incentives

The former president of the Rural Doctors Association of Australia, Dr David Rosenthal, in addressing the 1995 AMA Medical Workforce 2000 Summit concluded with the following sentiments:

"I can offer no more simple a solution than to say that a successful approach to this problem (of shortages of rural GPs) should identify likely rural doctors, admit them affirmatively to undergraduate training and support them whilst they occupy that position, vocationally train them, and continue to provide and enhance the incentive provisions which entice them to both relocate and to stay in rural areas." (Rosenthal 1995)

There is however no reason why the actions proposed by Rosenthal cannot be applied to specialists as well.

In this sense the Working Party believes incentives to encourage rural medical practice should be available to all clinicians considering, or involved, in rural practice. The incentives should be available during undergraduate education, postgraduate training, and for continuing education, as well as to support resident rural practitioners. Application of incentives should involve the identification of prospective rural clinicians, their affirmative entry to any necessary education or training programs, and the provision to them of financial, professional and family support. Once settled into a rural practice this support should be continued to ensure that they choose to remain in rural practice.

The Working Party feels that, where applicable, the current assistance arrangements for GPs should also be extended to resident rural specialists. It is recognised that such an approach may involve government in additional financial outlays.

The following are areas where the Working Party believes additional effort should be considered:

1. Undergraduate Education

The Commonwealth GPRIP undergraduate initiatives have been important in encouraging rural origin students to consider a medical career and the university medical schools to pursue affirmative entry policies for rural origin and Aboriginal students. The Working Party also supports the efforts of RUSC to increase exposure to rural practice in the Medical School's curriculums.

The continued provision of scholarships and financial support to students and graduates interested in rural practice is also considered important, with the recent increases in HECS fees a significant new incentive could be a HECS rebate in return for a guaranteed period of rural practice following training.

In addition, the Working Party considers the provision of information to prospective clinicians about the rural lifestyle, rural communities and the opportunities in rural

practice is essential to the breaking down of any preconceived negative perceptions that may exist. There may be an important role here for local government/communities, rural doctors associations and medical schools to combine and hold something like an annual rural practice careers expo to provide medical students with information about rural communities and rural life and to improve the contact between rural communities, practising rural clinicians and medical students.

This approach has been tried with success in the United States. Recently in New South Wales a successful information evening was held for final year medical students. The evening was designed to provide information about internships and the options and issues surrounding rural and urban practice.

2. Training

As far as is possible doctors in training have to be given opportunities to train in rural areas and at the same time the focus of the training has to be developing procedural skills. In this respect the recent decision of the Commonwealth Government to provide additional funding to encourage rural training is welcome. The issue goes beyond simply funding, however, and involves the State/Territory health departments and Colleges ensuring that there is also adequate supervision of interns and trainees, and junior doctors being prepared to consider rural based training.

3. Female Participation in the Rural and Remote Areas Medical Workforce

On the whole the female clinicians are comparatively more reluctant to work outside urban areas than male clinicians, yet the proportion of female clinicians in the medical workforce can be expected to increase over the next twenty to thirty years. This situation will have to be monitored to ensure that the shortfall in rural practitioners is not exacerbated by the increasing female participation in the medical workforce.

The issue of increased female participation in the medical workforce raises a number of issues and these have been examined in more detail by the AMWAC Female Medical Workforce Working Party (AMWAC & AIHW 1996b). This Working Party has highlighted the maldistribution of the female workforce as a key issue but concluded that there needed to be some more qualitative research conducted on why female clinicians do, and do not, take up rural practice before any policy response can be considered. It may then be necessary for government and the medical profession to develop particular strategies to overcome any dominating negative concerns.

4. General Practice

The arrangements that the Commonwealth and State/Territory health departments have in place to assist rural GPs with establishment costs, locum relief, training and CME should be continued.

5. Specialist Practice

Specialist practice is different to general practice. As indicated earlier, some medical specialties can only be practised in capital cities or in regional/rural centres with a large population catchment. It will, therefore, probably always be necessary for some rural residents to travel to access some specialist services.

Gadiel and Ridoutt (1994) and Harris (1992) in their respective studies concluded that rural specialist services should be layered within a hierarchy. The studies identified that anaesthetics, general medicine, general surgery, obstetrics and gynaecology, and orthopaedic surgery are basic specialist services that should be provided by resident specialists based in major rural centres.

At the next level down, where a larger population base is required to support a resident service, say upwards of 60,000 to 80,000 people are the specialties of dermatology, ear nose and throat surgery, gastroenterology, geriatric medicine, medical oncology, neurology, ophthalmology, plastic surgery, psychiatry, rehabilitation medicine and urology. After this only large rural centres can support services in the other specialties and most have to be provided on a visiting basis or through patients visiting specialist in the capital cities.

A structure such as this in turn implies that health departments will need to develop regional base hospitals as the centres from which the core specialist services can be delivered to rural residents. This development also allows visiting services to be provided to cover those specialties that cannot justify a resident service because of population size and infrastructure requirements. Basically a structure of this nature has always been in place but it is now occurring with a little more strategic focus and this development needs to be continued.

The Working Party also concurred with the recommendation of Gadiel and Ridoutt in their 1994 report on specialist rural practice that it is generally desirable that within major rural communities and hospitals there should be the equivalent of at least two full time equivalent resident specialists for each of the main specialties. At the same time, it is recognised that the necessary population mass and the sustainability of a practice may mitigate against the strict application of this benchmark in some instances.

This is the model of specialist service delivery that is preferable and any assistance that is given should be designed to support this model. Where a resident specialist service is not possible a visiting service is a desirable substitute.

The Working Party did not examine the training arrangements of the individual Colleges. These issues are being dealt with through the AMWAC specialist work program and incorporated within those reports. The Working Party does however, strongly support Colleges and State/Territory health departments giving priority to rural areas and regional centres when new training positions are being established.

The Working Party would also like to support the comments about rural practice in the AMWAC Orthopaedic Working Party report which stress the importance of Colleges and health departments identifying, where possible, potential rural vacancies several years in advance and seeking interested replacements from current trainees.

"Trainees need to be canvassed early on in their training to seek out those who are interested in possibly setting up practice in non urban areas. It is essential that rural areas plan well in advance what their future orthopaedic surgical needs are. The current practice to recruit trainees at the end of their training is unsatisfactory as most already have clear ideas of what type of practice they wish to follow. In most situations, two or three years notice can easily be given with correct planning and this affords a greater opportunity to look for those trainees and facilitate them in exploring the possibilities of rural practice." (AMWAC 1996)

Many of the general problems associated with rural practice that confront GPs and their families also confront specialists and their families, although it is recognised specialists do not reside in the smaller rural and remote communities. Problems of a similar nature to those experienced by GPs involve locum relief, establishment costs, poor infrastructure, inadequate exposure to rural practice in training, professional isolation, support for CME, and difficulties with spouses pursuing careers and children's education. To date incentive packages aimed at helping to reduce these disincentives for specialists have largely been non existent.

The Working Party's impression is that similar strategies to those that are in place for GPs should be considered for specialists. The development by the Commonwealth and State/Territory governments of a scheme similar to the GPRIP, and the related State/Territory government offshoots, for specialists should be of some assistance in increasing the number of resident rural specialists and/or in encouraging specialists in training to consider rural practice. It is recognised that any assistance programs may have to involve some targeting rather than being applied across the board to all specialties.

One key issue that has been identified is the need for a national specialist locum service. Locum relief is as important for specialists as it is for GPs. Western Australia has had a scheme operating for a year now. The scheme is run in conjunction with the University of Western Australia and covers the specialties of general surgery, obstetrics and gynaecology, paediatrics and psychiatry. The New South Wales government has also recently committed itself to establishing a specialist locum service. Suggestions on how a specialist locum service could operate are provided in Appendix B.

6. Temporary Resident Doctors

The use of TRDs has been considered a suitable short term measure to alleviate the rural workforce shortfall; however the Working Party felt there was a need for national guidelines for the registration, supervision and assessment of TRDs filling area of need positions and it is pleased to note that the Australian Medical Council (AMC) and all State Medical Boards have recently reached agreement on a process to achieve this.

This new process will involve the following main principles:

- qualification and experience should match the clinical service requirements of the area of need position
- registration of medical practitioners in area of need positions should be determined on standards not workforce considerations
- area of need registration should not be a means of bypassing the assessment

- requirements for general registration
- area of need should be a temporary measure and should not be open ended. A maximum limit, normally two years, cumulative across all States/Territories should apply
- resident overseas trained doctors who have passed the AMC multiple choice questionnaire examination should be eligible to apply for area of need positions
- the registration of TRDs should be limited by contract and they should not be eligible to sit the AMC examination

The Working Party endorses this approach.

Some members of the Working Party have expressed concern at the recent decision of the Commonwealth Government to no longer deem TRDs as medical practitioners for Medicare purposes unless they have relevant overseas postgraduate qualifications in their field. However, in doing so they recognised the need for more information on this issue before making any definitive conclusions on the impact of the decision on the rural medical workforce.

7. Nurse Practitioners

The recent work and trials of nurse practitioners in New South Wales provide an example of the possibilities for the use of nurse practitioners to fill service gaps in designated local areas of need in a manner similar to the use of TRDs (New South Wales Health Department 1996). This could be particularly useful in remote situations and supporting doctors in rural areas.

The Working Party recommends that all State/Territory health departments should examine the possibilities of developing a model for the use of nurse practitioners.

8. Local Government/Local Community Involvement

To date the role of local government in providing assistance to attract and retain rural clinicians has been largely overlooked.

Some of the identified disincentives to rural medical practice relate more to local issues than anything else and it may be that they can be modified by local government.

One factor that also seems to dominate considerations, based on evidence from WACRRM and anecdotal evidence from RDRN, is that despite the positive macro program framework that is now in place, invariably the attraction and retention of GPs is then governed by micro issues. In many cases it would seem to be the response of the local community to the loss of a doctor that becomes all important, including the community knowing what programs are available to assist them in finding a new doctor.

Similarly, it can then be how a new doctor is accepted into the local community (including acceptance by the local hospital and regional health authority) that influences retention. Indeed, exit interviews conducted by WACRRM often highlight local issues as the reason for a GP not remaining in a community.

Some local issues, such as concerns about the standard of secondary education are not solvable by the local community, but others (such as providing houses, surgeries and cars on lease back arrangements) may be and it could be that policy responses to date have tended to ignore the potential importance of local government in helping to reduce these disincentives. Some local government bodies do provide houses, surgeries and cars but it is an area in which all rural local government bodies could consider developing a policy.

Local incentive packages might also include the provision of secondary school boarding fees in return for a guaranteed period of service by the clinician. Secondary education is often cited as a reason doctors leave rural practice; however no assistance schemes have been put in place to cover the cost of boarding school fees, if the doctor and his/her family are prepared to use boarding school as an option. Assistance of this nature may not be easily managed on a State/Territory basis but is possibly something that local government could provide on a case by case basis as part of an overall local incentive/employment package.

The Working Party also endorses the use by WACRRM and some GPRIP assessment panels of exit interviews of GPs leaving rural practice. Knowing why individual doctors are leaving is an important tool for ensuring retention of future doctors and exit interviews should be conducted across each State/Territory. These could be co-ordinated centrally by State/Territory health departments, although the one overriding difficulty with exit interviews is deciding which body is appropriate to conduct them. If the body conducting the interviews is likely to receive criticism then the clinicians' willingness to provide useful information could be compromised.

Rural communities and local government also has an important role to play in marketing their community and the rural lifestyle. In this respect a recent joint initiative of the Central West Division of General Practice in New South Wales, the former Lachlan District Health Service and the Shire Councils of Lachlan and Bland is worth mentioning. Faced with a regular turnover of GPs the bodies produced a video promoting their communities and rural practice within the communities. The video focused on both the positive aspects of rural practice and how practising doctors dealt with the perceived negatives. Whilst it is too early to assess the success of this approach it would seem that ventures such as this can only help to bridge the information gap and foster a greater awareness of rural practice and thereby assist with filling vacancies. It could be especially useful if linked up to a careers expo or greater marketing by communities within medical schools.

This example also illustrates the importance of getting all the key community players together to develop a specific local solution to their problem.

9. Information Technology Options

Technology may offer some opportunity to augment services, particularly the provision of some specialist services through telemedicine.

Western Australia and Victoria provide rural GPs with access to specialist advice through a toll free 1 800 telephone number. New South Wales is considering introducing this initiative and it may be a useful for other State/Territory health departments to consider.

The Working Party did not examine the telemedicine possibilities at all. New South Wales is currently trialing a number of pilot projects and it would be prudent to await the outcome of these trials. In addition, AHMAC has recently established a Telemedicine Working Party and it is more appropriate for that committee to examine and report on the issue.

Technology has enormous potential to bridge some of the gaps between urban and rural service delivery, but it should not be viewed as a cure-all or a substitute for action to encourage additional medical practitioners to locate and work in rural and remote areas.

Meeting the Current Shortfall in Rural and Remote Medical Practitioners

How can the current shortfall in rural medical practitioners be met in the time between any additional strategies are introduced?

Essentially, the answer to this question would appear to come down to a combination of five options:

1. it is not met;
2. rural GPs and specialist continue to work comparatively longer hours than their urban counterparts to fill the gap as best as possible;
3. rural people continue to travel further than should be necessary to access services;
4. substitution of the service provided by medical practitioners by alternative providers such as nurses; and
5. the application of innovative information technology options.

The reality is likely to be a combination of all five options and could be expected to vary from community to community and from region to region.

APPENDIX A - CURRENT INITIATIVES TO ENCOURAGE RURAL PRACTICE

The following details were supplied by the respective health departments. This was initially done in early 1996; where advised additional strategies have been added.

Commonwealth

Image of Rural Medical Practice	
Improve attitudes to rural practice	As part of the General Practice Rural Incentives Program (GPRIP), the Commonwealth initiated an advertising campaign Rural Australia needs more good doctors. Between 1994 and 1995 results of the campaign suggested that this has raised awareness of rural practice amongst urban GPs.
Undergraduate Education	
Increase the selection of rural origin students	<p>The GPRIP undergraduate grants are available to the ten medical schools and aim to increase medical student experience and awareness of rural health through a number of initiatives.</p> <p>Funding is available through the undergraduate grants of GPRIP aim to address negative attitudes to rural practice through improving curriculum content, increasing student rural placements, supporting teachers in rural areas, including rural health issues in the assessment, supporting rural student clubs, improving academic support for rural placements and co-operating with agencies with direct contact with rural GPs for student placements.</p> <p>One of the key targets for the GPRIP undergraduate grants is to develop and implement strategies which increase the selection of rural origin students proportional to the rural population of each state.</p>
University departments of rural health	\$27 million over four years has been provided for six university departments of rural health, the first two of these will be established at Mount Isa and Broken Hill.
Exposure to rural practice	150 scholarships per year under the newly established John Flynn Scholarship scheme are being provided to enable medical students to spend time training in rural areas.

Postgraduate Training	
Improve rural GP training/ Rural health training units	<p>The Commonwealth provides \$22 million annually for the RACGP Training Program which is the only vocational training program for doctors wishing to practice as GPs. This program requires that all trainees spend three to six month placement in an area of medical service disadvantage. Most of these placements are in rural areas. As part of the program an additional advanced rural skills training year is also available for GPs seeking a career in rural medicine. The advanced rural skills year provides training in anaesthesia, surgery and obstetrics.</p> <p>The Commonwealth has also supported the State governments in the establishment of Rural Health Training Units.</p>
Increased rural based specialist training	<p>The Commonwealth has provided funding for additional specialist training places in rural areas in order to increase the exposure of trainees to rural practice, improve career opportunities in rural areas and provide support to existing rural specialists. 14 additional positions were funded in 1995-96.</p>
Professional Isolation	
CME	<p>All vocationally registered GPs are entitled to a higher schedule fee under Medicare in order to cover the CME requirements of vocational registration. However in recognition of the additional difficulties faced by rural GPs, funding has been provided for projects such as the installation of satellite dishes in over 280 sites in all states; numerous CME projects funded through the Divisions and the Rural Divisions Co-ordinating Units specially tailored for rural practitioners.</p>
Assistance with recruitment	<p>The Commonwealth established Health Jobs Australia on the Internet in June 1996 to provide access to information on medical vacancies in Australia .</p>
Time Commitment	
GP locum relief	<p>The Commonwealth supports locum projects for GPs in each State and the Northern Territory through the GPRIP CME/locum grants (\$5 million per year).</p>
Financial	
Assistance with the costs to GPs of establishing a rural practice	<p>The relocation grants, available through GPRIP, provide funding to assist with moving to and establishing a practice in an area in need of GP services. These grants target the small rural and remote areas that have the greatest difficulty in attracting GPs. The equipment grants, available in 1995 through GPRIP, have been a one off incentive to improve practice equipment (\$1.8 million).</p>
Spouse/Family	
Family support	<p>Through the GPRIP Assessment and Support panels, the Commonwealth has provided funding for the establishment or extension of family support networks in each State and the Northern Territory. Some of these groups have made links with undergraduate clubs, Divisions of General Practice and Rural Divisions Co-ordinating Units.</p>

New South Wales

Undergraduate Education	
Increase the selection of rural origin students	To increase the number of rural high school students entering medicine, Newcastle University has a scheme whereby approximately half the student intake will be decided not just on Tertiary Entrance Rank, but on interview and previous experience. This enables more students to enter medicine from rural backgrounds than would otherwise be the case. The University of New South Wales has a set aside seven places for >educationally disadvantaged= students (which can include rural students who would not otherwise have met the tertiary entrance requirement), and the University of Sydney's new post graduate medical course, which takes students from 1997, is likely to improve the intake of rural students.
Greater exposure to rural medicine	As early positive exposure for medical undergraduates to rural practice is a factor in determining whether or not undergraduates will practice in rural areas after graduation, the three New South Wales Medical Schools require their students to undertake rural placements. These currently commence in fifth year at the Universities of Sydney and New South Wales, and third year at Newcastle University.
Financial support for students interested in rural practice	The Rural Doctors Resource Network (RDRN) administers the Rural Cadetship Scheme on behalf of the New South Wales Department of Health. This scheme provides medical undergraduates with financial support in their last two years of medicine and in return the students agree to spend two years in a rural location after graduation (in either intern and RMO1 years or RMO1 and RMO2 years). The Scheme has been favourably evaluated. RDRN has recently commenced the co-ordination of the inaugural Bush Bursary Scheme in which local councils and other interested community groups and the RDRN sponsor third year medical students for three weeks in the country and provide each student with \$2,500 towards the costs associated with their medical studies
Rural health clubs	Multidisciplinary Rural Health Clubs have been established at the Universities of Sydney, New South Wales and Newcastle. The clubs aim to encourage students to practice in rural NSW after graduation. The clubs provide support, education and practical information to students who show interest in pursuing rural careers and also undertake activities to motivate other students to consider rural careers.
Postgraduate Training	
Rural health training units	Five Rural Health Training Units (RHTUs) have been established - in Wagga Wagga, Dubbo, Broken Hill, Orange and Tamworth - which aim to provide current and future rural doctors with the necessary high quality support, education and training they require to competently and confidently perform their duties. The RHTUs are funded by either the New South Wales or Commonwealth Governments or a combination of both.
Increased rural based specialist training	The New South Health Department and the RDRN are currently developing a rural specialist workforce strategies, central to which will be the desire to increase rural based specialist training.
Professional Isolation	
CME	Since 1988 the RDRN has supported rural doctors through rural refresher CME

Professional support and assistance with recruitment	weekends. RDRN publishes, every three months, an information booklet of rural practice vacancies. RDRN also provides active support to help towns recruit doctors and acts as a point of contact for rural doctors.
Time Commitment	
GP locum relief	Since 1988 the RDRN has provided locum support to rural doctors in NSW. This responsibility has now been handed to the Rural Divisions Co-ordinating Unit which has received funding from the Commonwealth to provide locum/CME support. RDRN has permission to recruit up to five overseas trained doctors a year as rural locums. During 1995 an Older Locum Doctor Service was established which aims to supply rural locums from a pool of older city doctors.
Financial	
Improved GP remuneration	In 1995 the New South Wales Department of Health introduced a financial incentive scheme to encourage rural GPs to continue to do obstetric work.
Spouse/Family	
Family support	The New South Wales Rural Doctors' Association Spouse Group has received Commonwealth funding for doctor family support activities and has established a HUGS (Holidays for Undergraduates) Program which aims to introduce medical students to rural life by providing holidays with rural medical families. RDRN also provides a >Spouses Program= at statewide Rural Refresher Weekends.

Victoria

Image of Rural Medical Practice	
Improve the image of rural practice	<p>The Centre for Rural Health and the Centre for Health Education and Social Sciences through Monash University received funding from the Commonwealth's Rural Health Support, Education and Training (RHSET) Program to promote careers in health care professions to rural secondary students.</p> <p>The Co-ordinating Unit for Rural Health Education in Victoria (CURHEV), established in 1995, aims (among other things) to promote health professional practice in rural and remote areas as "desirable, rewarding and achievable vocations".</p>
Undergraduate Education	
Greater exposure to rural medicine; Rural health clubs	The Centre for Rural Health has implemented a series of strategies at undergraduate level which have increased the exposure of medical students to rural practice. These include the formation of a student run Rural Practice Club which aims to raise interest in rural practice beginning with first year students and following through their courses; rural GP mentors, usually from the same town or area as the student; rural placements and rural general practice attachments. The Centre also provides a base for co-ordinating rural general practice vocational training and facilitates specialist trainee rotations to the country.
Financial support for students interested in rural practice	Victoria has recently established the Rural Health Scholarships Foundation which plans to provide up to 30 scholarships to undergraduate students interested in rural practice.
Postgraduate Training	
Rural health training units	<p>The Centre for Rural Health was established through collaboration between Monash University and the La Trobe Regional Hospital in 1992 and was the first Rural Health Academic Unit of its kind in Australia. A second Rural Health Unit has been established as part of the Centre in Bendigo.</p> <p>The Centre promotes the development of continuing education and professional development support for all rural health professionals and offers a Graduate Diploma and Masters of Rural Health. The Centre also undertakes and supports rural health research.</p>
Increased rural based training positions	The Victorian Department of Human Services has agreed to fund some specialist positions in rural areas and has requested information from the relevant Learned Colleges on potential locations.
Professional Isolation	
CME	CURHEV provides annual funding to individual GPs up to a maximum of \$6,000 to assist with CME.
Time Commitment	
GP locum relief	The Victoria Rural Divisions Co-ordinating Unit administers a statewide locum program funded by Commonwealth Rural Incentive Program money. In addition, three Divisions of General Practice employ their own locums for doctors in their

	geographic areas.
Spouse/Family	
Family support	The Rural Family Network Program provides support for spouses and families of doctors in rural Victoria. It is funded by the GPRIP.

Queensland

Undergraduate Education	
Increase the selection of rural origin students	The Queensland Medical Education Centre and the Medical Faculty actively attempts to recruit students from the country for entry to medicine. Secondary students who are thinking about a career in medicine and their families are, for example, encouraged by being invited together for information sessions. The proposed non metropolitan clinical schools should attract the rural graduates who are interested in rural practice.
Greater exposure to rural medicine	Poor image, negative attitudes and lack of understanding should be addressed by the new curriculum which is being introduced in all Queensland schools. The Southern Clinical School (Brisbane based) has rural centres (eg Toowoomba) as a critical part of their structure.
Financial support for students interested in rural practice	The Queensland Health Medical Scholarship Scheme has operated for over 50 years. The management of the Scheme is currently being decentralised to the three Rural Co-ordination Networks being established. Each scholarship holder is allocated to a Rural Co-ordination Network which arranges a rural doctor as a mentor to ensure that the student has continuing exposure to rural lifestyle and rural medicine pre and post graduation.
Postgraduate Training	
Rural health training units	<p>There are four multidisciplinary RHTUs in Queensland - in Cairns, Rockhampton, Toowoomba and Townsville. These all provide rural doctor training. There is a Clinical School in North Queensland, based in Townsville, with a Professor of General Practice and Rural Health. Toowoomba has appointed an Associate Professor of General Practice and Rural Health. In addition, the rural public hospitals have accredited training positions for the non specialist medical workforce.</p> <p>Queensland Health regards establishing a critical mass of specialist staff of at least two full time equivalents for each of the main specialists within provincial hospitals as an urgent priority. A financial incentive package to attract and retain specialists was passed by the Queensland Cabinet in June 1995. Queensland has also funded 12 additional rural registrar posts effective from January 1996.</p>
Time Commitment	
GP locum relief	<p>Queensland is establishing three Rural Co-ordination Networks in January 1996 to provide co-ordination of rural non specialist relieving doctors to rural public hospitals. This will assist existing rural doctors.</p> <p>Queensland Health has committed approximately \$1 million per annum for the next three years towards an integrated two year doctor training program and co-ordination of rural relief. (The establishment of the three Rural Co-ordination Networks). Rural relief is provided by non specialist junior hospital doctors and Queensland Medical Scholarship holders.</p> <p>The Queensland Rural Divisions Co-ordinating Unit provides locums to rural and remote GPs through the City Docs Go Bush Scheme which enables Queensland city doctors to undertake rural and remote locums and also through the recruitment of overseas doctors.</p>

Financial	
Improved remuneration	Queensland Health provides reasonable expenses where doctors move back in the public sector.

South Australia

Image of Rural Medical Practice	
Improve the image of rural practice	The South Australian Rural Practice Training Unit has been very active in promoting the image of rural practice in South Australia.
Undergraduate Education	
Increase the selection of rural origin students	The University of Adelaide has developed a Fairway Scheme whereby students from under represented high schools are given a greater opportunity to study at the university; since 1993 this has seen the number of students from rural origin entering medicine increase from 5% to 11% of students.
Identifying potential medical students of rural origin	The South Australian Rural Practice Training Unit has a programs to encourage country high school students to study medicine and practice in rural areas after graduation. The program involves principals from rural high schools and city boarding schools identifying potential students and targetting them with information about a medical career. The program also involves visits to schools and country field days by the staff of the Unit.
Greater exposure to rural medicine	Both the Adelaide and Flinders University Medical Schools require fifth and sixth year students to undertake two weeks of rural placements.
Financial support for students interested in rural practice	The South Australian government provides funding for ten medical student scholarships per year for students in the last three years of their course, in return students usually undertake to spend an equivalent period of time in a rural area.
Rural health clubs	Rural Clubs operate at both Adelaide and Flinders Universities. The clubs promote rural practice among students by arranging seminars, country visits, barbeques etc. Fourth year students who are club members can spend a week during vacations with a rural practitioner.
Postgraduate Training	
Rural health training unit	The South Australian Rural Practice Training Unit was established in October 1991 and from 1996 will be under the auspices of the multi-disciplinary South Australian Rural Health Training Unit. The Rural Practice Training Unit was established to assist rural general practitioners. (General practitioners can undertake refresher training in hospitals paid as Registrar/Senior RMOs dependent on role. Anaesthetic training positions are also available).
Increased rural specialist training positions	South Australia is hampered by the fact that there are no specialist training positions in South Australian country hospitals - specialist training has to be metropolitan based.
Professional Isolation	
CME	CME financial support to GPs of up to \$3,000 per annum is available.

Time Commitment	
GP locum relief	An Integrated Rural Locum Service operates in South Australia and provides locum financial support of \$7,200 per annum for single practice GPs in solo practice towns.
Spouse/Family	
Family support	South Australia has a very active Rural Medical Family Support Group.

Western Australia

Undergraduate Education	
Increase the selection of rural origin students	The University of Western Australia medical school reserves five or six places for rural high school students whose tertiary entrance results do not exactly meet the entrance requirements for medicine. The University also provides 2 places for Aboriginal students.
Identifying potential medical students of rural origin	WACRRM co-ordinates a four day medical career residential workshop at the University of Western Australia for 12 year ten rural high school students and six Aboriginal high school students, who have indicated an interest in pursuing a medical career. The workshop provides information to the students on what they have to aim for to get into medical school, what the undergraduate course is about and what it means to be a rural doctor.
Greater exposure to rural medicine	Rural attachments are required of Western Australian medical undergraduates in their final year. A program of electives in obstetrics, surgery, psychiatry and general medicine is also conducted in rural hospitals during the fifth and sixth years of the medical course.
Financial support for students interested in rural practice	The Country Medical Foundation was established in Western Australia by donations from Shires and commercial organisations with significant rural bases. The Foundation provides annual scholarships to rural students wishing to enter medicine or nursing undergraduate courses. The usual scholarship is \$5,000 per year. Since its inception in 1990 22 medical students have been assisted; in 1996 13 scholarships were provided.
Rural health club	A rural students club (the "SPINRPHEX" Club) has been established which meets regularly.
Postgraduate Training	
Rural health training unit	The Western Australia Rural Training Unit at Fremantle hospital has the potential to produce five rural GPs per year. There is a comprehensive four year training program aimed at equipping potential GPs with the skills necessary for rural practice.
Professional Isolation	
CME	WACRRM has developed programs from the undergraduate stage through to ongoing CME support for existing GPs. As well as CME weekend seminars, WACRRM also co-ordinates ten satellite CME broadcasts per year.
Professional support	A Rural Access Line has been established by WACRRM to support rural GPs. The free 1 800 telephone line provides rural GPs with direct access to specialists at Fremantle hospital. WACRRM was established in 1990 to provide general support to rural general practitioners; as well as the specific programs it is involved in. WACRRM also helps rural Shires with the recruitment of doctors.
Time Commitment	
GP locum relief	Western Australia relies heavily on overseas trained doctors to provide locum relief, although there has been a gradual increase in Western Australian graduates. Western Australia currently experiences turnover in rural GPs at a rate of approximately 25 per year. As a result of the growing use of CME/locum

<p>Specialist locum relief</p>	<p>support arrangements under the GPRIP the state has a need for up to 30 full time locums.</p> <p>In 1994 WACRRM entered into an agreement with the AMA Locum Service to facilitate the provision of rural locums. GPRIP funding for CME/locum support in Western Australia is in the order of about \$1 million per annum.</p> <p>Western Australia has contributed over \$350,000 to support locum services for resident rural specialists following the recommendation of a Ministerial report on rural specialists.</p> <p>This program targets five key specialist areas - anaesthetics, general surgery, obstetrics and gynaecology, paediatrics and psychiatry. This is part of a wider range of recommendations to remove disincentives for rural resident specialists.</p>
<p>Spouse/Family</p>	
<p>Family support</p>	<p>A Rural Doctors Family Support Network operates in Western Australia, providing support to rural doctor families with the aim of reducing the isolation some families can feel and supporting incoming doctor's families to adjust to the rural lifestyle.</p>

Tasmania

Undergraduate Education	
Increase the selection of rural origin students	Tasmania aims to have approximately 20% of its annual medical student intake comprise rural students.
Greater exposure to rural medicine	Rural placements for medical students begin in second year and two rural teaching sites are being established in Tasmania to provide the facilities and accommodation for students to undertake rural projects.
Rural health club	A Rural Health Student Club has recently been established to promote rural practice.
Postgraduate Training	
Rural health training units	In 1994 the Tasmanian Rural Health Training Unit was established in Launceston with Commonwealth RHSET funds. The RHTU currently operates 3 posts for Advanced Rural Skills Training. It is planned to increase the number of posts over the next 12-18 months to include paediatrics, adult medicine, emergency medicine and psychiatry.
Professional Isolation	
CME	Twice yearly CME weekends are arranged for rural doctors.
Spouse/Family	
Family support	The spouses have chosen not to formalise their support group and instead prefer the informal get togethers that occur at the twice yearly rural doctor CME weekends.

Northern Territory

Professional Isolation	
CME	After five years continuous service in a remote area fully paid study leave of 13 weeks is available; 13 weeks study leave is then available for each additional five years of remote practice.
Financial	
Improved GP remuneration	Remote area doctors who have accepted an enterprise agreement for medical officers are paid two salary levels higher for the same duties performed as their counterparts in Darwin and Alice Springs. A retention bonus of \$10,000 after two years of continuous service in a remote area is paid, and thereafter a bonus of \$20,000 for every two years of continuous service in a remote area is available.
Assistance with the costs to GPs of establishing a rural practice	For doctors practising in remote areas payment of relocation expenses and up to 60% of professional telephone calls, plus the provision of rent free accommodation is available.

APPENDIX B - POSSIBLE SPECIALIST LOCUM SERVICE MODELS

In terms of a workable specialist locum service model, the following is a summary of the approach currently being considered by the New South Wales Health Department and the RDRN. The suggested cost of the service relates only to New South Wales. The Working Party is appreciative of the RDRN for providing this information.

The New South Wales Department of Health has indicated that it will be seeking expressions of interest from organisations to establish a Specialist Locum Scheme for rural New South Wales. The Department has sought the assistance of the Rural Doctors Resource Network in determining how such a scheme might operate.

To establish the scheme the following steps could be taken:

1. Following a survey of locum requirements, the four or five disciplines with the highest number of locum weeks required would be selected. The scheme would be piloted for these disciplines.
2. For each of these disciplines funding would be provided to the designated University Department to employ one to two (subject to locum demand) additional academics for that discipline. The University Department would then be responsible for providing the locum support and the University would benefit from any down time between locum services. The down time could be dedicated to providing CME to rural specialists, research into matters of interest to rural specialists and/or undergraduate teaching on rural topics. The locums would not necessarily all be provided by the additional staff member - it could be shared by the Department academics.

Alternatively the Departments may be able to recruit specialists wishing to be responsible solely for the locum work and this would also be feasible with this person employed by or contracted to the University.

3. The most likely source of the additional academics and/or dedicated specialist locums would be either new specialists (for example those who may be returning from overseas) who are unsure of where they wish to practice in the longer term, those specialists moving towards the end of their careers who may be interested in the different work for a year or two, or retired specialists. The Universities and the Colleges would be most informed about who these people are and could do some head hunting.

Alternatively, if it proves difficult to recruit Australian specialists, the locum scheme could be declared as an area of need and overseas specialists could be employed on time limited contracts.

4. The Specialist Locum Service would need administrative support and rural specialists would require a point of contact to apply for locums. This could be provided separately for each of the disciplines through the University Departments or centrally by the RDRN or an equivalent body in other States/Territories. It may

be useful to have one central database.

The cost of the Specialist Locum Scheme would be in the order of \$562,500 per annum as follows:

Say five disciplines are selected and say the locum demand averages a total of 7.5 additional senior lecturers for the five disciplines at \$100,000 each and say that 50% of this must be underwritten*

= 50% of (7.5 x \$100,000) = 50% x 750,000 = \$375,000

plus travel costs of \$10,000 per specialist = \$ 75,000

accommodation costs per specialist of say \$5,000 = \$ 37,500

indemnity costs (it seems reasonable to assume that

the specialists will cover their own indemnity fees, but

assistance may be need to be given to eg retirees coming

out of retirement etc - thus some money should be set assist

for this say, = \$ 25,000

administration component = \$ 50,000

Total cost per annum = \$562,500

* The other 50% of the salaries of the academics would be raised by revenue generated through the salaries paid by the employing specialists. It is estimated that 50% of the salary would need to be underwritten to allow for the down time (exact down time can not be determined until a survey has been conducted) and to allow a subsidy scheme to operate for specialists who require locums because they are undertaking continuing medical education. The revenue side of the scheme will require further consideration.

APPENDIX C - INTERNATIONAL COMPARISONS

The difficulties in recruiting general practitioners and medical specialists to rural areas is not unique to Australia but parallels difficulties experienced in North America and elsewhere in the world. These difficulties arise from a range of complex factors but the overall number of medical practitioners in the countries appears not to be a factor. In other words the problems relate to workforce distribution rather than an overall undersupply of medical practitioners.¹ Physicians in virtually every country prefer to settle in metropolitan areas.²

Overseas initiatives aimed at addressing the workforce redistribution are most developed in the United States (US) and Canada and focus primarily on >sensitisation= of undergraduates and financial incentives for those who enter rural practice. They apply to general practice and selected specialties.

High School and Medical Undergraduate Programs

As evidence suggests that students from rural backgrounds are more likely to go into rural practices after graduation³ many medical schools offer a variety of incentives to attract rural high school students to medicine. These range from promoting medical careers to rural high school students to affirmative action programs for rural students to enter medicine.

Early exposure to rural practice during undergraduate medical education is also shown to help develop an interest in rural practice⁴ and most medical schools now provide this opportunity for their students. Norway went further and established a medical school in the remote northern part of the country in 1972 hoping that graduates would stay in the north and thus enhance the quality of health services in this area. The results have been positive.⁵

¹Canadian Medical Association: Report of the Advisory Panel on the Provision of Medical Services in Under Served Regions, Canadian Medical Association, Ottawa, 1992:2, quoted by Barer and Stoddart, 1992, p 619; Norris and Norris, 1988, p 541; see also Rosenblatt, Whitcomb et al, 1992; Rosenblatt and Lishner, 1991, p 43; and Rabinowitz, 1993, p 934; Canedo, 1974, p 1133 (writes about Mexico); Kobayashi and Takaki, 1992 (Japan); Barnett, 1992 p 171

²Schroeder and Beachler, 1995, p 1001

³See McDonald, 1990, p S91; Rourke, 1993, p1282; Vanselow, 1990, p S31; Kassebaum and Szenas, 1993, p 234; Pathman, Konrad and Ricketts, 1992, p 52; and Talley, 1990, p S22

⁴Rourke, 1993, p 1282

⁵Magnus and Tollan, 1993, p 252

In the US scholarship and bursary programs are also common with medical students offered financial support in exchange for agreeing to practise in predesignated rural areas for a period of time after graduation. Student loans are >forgiven= for those who enter rural practice after graduation (student debts are high and encourage students to enter the specialty streams where they perceive they can earn more money). The medical undergraduate curricula of many universities have been made more relevant for rural practice. >Job fairs= are hosted so that rural hospitals can promote their services to the medical practitioners of the future. Health Professional Recruitment Tours have been tried, with some success⁶.

Rural Health Departments have been established in Medical Schools and in the United States federal funding has been provided (first in 1985) to establish Area Health Education Centres in areas of medical disadvantage (rural, inner city) where students undertake placements. The National Health Service Corps Scholarship Program is another initiative of the federal government and since the early 1970s has provided scholarships to 13,000 physicians and other health workers who have agreed to serve in >Health Personnel Shortage Areas= after graduation.⁷

Many of the undergraduate strategies have not been established for sufficient time to be fully evaluated. The Rural Physician Associate Program of the University of Minnesota is claimed to be one of the most successful initiatives in the United States.⁸ Also successful is the University of Washington's WAMI Program which was established in 1971 with a federal grant and by 1975 was fully financed by the participating states - Washington, Alaska, Montana and Idaho.⁹ The Jefferson Medical College's Physician Shortage Area Program (PSAP), established in 1974, preferentially selects applicants who grew up in or who had strong family ties with rural and under served areas and the results indicate that the PSAP has been successful in increasing the number of family physicians in rural and under served areas.¹⁰

Practice Initiatives

North American studies of both family doctors in small rural communities and specialists in regional centres emphasise spousal employment, CME, relationships with partners, health service amenities, available back up facilities and recreational activities, as major elements in attracting and retaining medical practitioners.¹¹ Initiatives aimed at addressing these issues include collaborative arrangements between State Offices of Health, private, non profit groups and professional organisations to form professional replacement networks (for example Minnesota Centre for Rural Health and the American Academy of family Physicians Placement Service) - programs designed to provide recruitment and retention advice.

⁶Rafuse, 1991, pp 68&69

⁷See Rabinowitz, 1983; and Rabinowitz, 1993

⁸Hickner, 1991, p 117

⁹Professor Dan Hunt, (Assistant Dean of the University of Washington Western School of Medicine)

¹⁰See Rabinowitz, 1983; and Rabinowitz, 1993

¹¹Anderson, Bergeron and Crouse, 1994

Strategies proposed for Canada include new residency training programs designed explicitly to prepare generalist specialists as rural regional consultants and financial incentive packages for training and practice for those specialities in short supply; income incentives for rural practice; incentives for CME and locum support and rural academic centres; rural training sites accredited by the Royal College of Physicians and Surgeons of Canada; designating certain academic centres as specialist rural training centres; rural area income guarantees; isolation allowances and fee levels sensitive to distance from a referral centre.¹²

¹²Barer and Stoddart, 1995

Some Canadian provinces have relied on financial incentives - northern or isolated income programs in British Columbia and Ontario, and differential fee schedules in Manitoba and Quebec. The results of these have been described as at best equivocal.¹³

Other strategies suggest alternative methods of payment (for example regional capitation for general practice to encourage shared arrangements and reduced on call responsibilities); the provision of funds for travelling to CME; for children travelling outside the area for university education; rotation models whereby medical faculty members regularly rotate through rural areas so that the rural specialists can interact with their urban colleagues, can have a turn in urban practice, take vacations or undertake CME. As well 'sticks' are discussed - restricting admitting privileges and regional billing quotas in urban areas. Reliance on foreign graduates is also mentioned, although evidence suggests that a large number of the foreign graduates end up in urban areas after five years or so.¹⁴

In the US the strategies are directed at appropriate training for rural practice; access to CME; payment equity - the over proportion of Medicare and Medicaid patients in rural areas and the level of Medical Assistance reimbursement results in a disparity between urban and rural physician incomes; protection and development of rural hospitals - procedural work has declined making rural practice less attractive; good hospital and community infrastructure.

Community Initiatives

Local community initiatives are reasonably well developed. These include Practice Vacancies directories, assistance with matching the prospective doctor with rural communities¹⁵ and the formation of community recruitment committees which plan recruitment strategies; develop family medicine programs for students planning a rural career and stay in touch with them; understand the importance of the initial impression made on students and prospective doctors; identify the potential applicant's interest and family's interests and address these interests; pay for site visits of prospective doctors and follow up after the site visit to answer questions and provide clarification.¹⁶

Co-operation

Co-operation between stakeholders - doctors, communities, medical schools, medical associations, state and federal government agencies - especially where this is reflected in government policy - is described as the key to successful strategies to recruit doctors to areas of doctor shortages.

¹³Barer and Stoddart, 1992, p 620

¹⁴Barer and Stoddart, 1992, p 622

¹⁵See Anderson, Bergeron and Crouse, 1994, p 31

¹⁶Riley, Myers and Schneeweiss, 1991, pp 503 - 504

Skills Substitution

In Canada regions such as the Northern Territories and the Yukon are introducing training for non physicians (extended duty nurses, physician assistants and other personnel) who can then provide a wide spectrum of primary care services traditionally viewed as exclusively the practice domain of physicians.¹⁷ >Physician substitutes= become the front-line care givers and gatekeepers, able to call on regional physician consultants in larger centres, who in turn can call on regional referral hubs with on-line clinical information data bases and specialists trained specifically to serve non urban settings.

Stocks and Peterson¹⁸ report that there are moves in Canada and Britain to upgrade the training of general practitioners so that they undertake specialist work in areas of specialist undersupply. In the US non specialists are used in isolated areas, for example, in obstetrics. The American Academy of Nurse Practitioners claim that 80% of US primary services for adults and 90% of paediatric services could be undertaken by nurse practitioners.¹⁹

Technological

The development of telemedicine is assisting with the provision of specialist services such as psychiatry and radiology in areas where these specialists are undersupplied. Easy access to information data bases (for example clinical texts) is also assisting physicians who are isolated. The use of satellite and teleconferencing facilities brings CME and professional support to remote areas.

¹⁷ Barer and Stoddart, 1992, p 619

¹⁸ Stocks and Peterson, 1994, pp 29-30

¹⁹ 1991 US Senate Paper quoted by Stocks and Peterson, 1994, p 30

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