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Foreword Medical Workforce Planning – an Art not a Science

King Lear, Act II, Scene IV

Goneril
Hear me, lord.
What need you five-and-tewnty, ten or five,
To follow in a house, where twice so many
Have a command to tend you?

Regan
What need one?

Lear
O! reason not the need; our baset beggars
Are in the poorest things superfluous:
Allow not nature more than nature needs,
Man's life is cheap as beast's.

Professor Alan Maynard, University of York, UK, reflecting on international comparisons in medical workforce planning:

"The US admits there is anarchy constrained by professional power and opinion and very little evidence. The rest of the countries seem to plan but have little success. The British are crazy. We have ratios and for about thirty years I have asked them why they do their workforce planning in this way and we are now told the Australians have sometimes used ours!.. Recently this national (NHS) plan has raised the number into medical schools by one thousand. Asking senior colleagues in the Department of Health, the best way to explain this is in the Yes Minister type mode.

The Minister said "we need more doctors".
And they all said "Yes Minister".
And he said "we want a round number".
And they said "yes Minister". "A thousand"
And he said "Yes".

And that's the basis of our policy. So have faith in the way the British do it."

(AMWAC, 2000, 5th International Medical Workforce Conference Proceedings, November 2000, p29)
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Executive Summary

The General Practice Workforce Plan for Rural and Remote NSW projects the GP workforce requirements from 2002 to 2012 for RRMA areas 3 – 7 in NSW. The projections are estimated using a predictive model that starts from a baseline of the current GP shortage and projects both the estimated future supply of GPs and the estimated demand for their services. By comparing future supply and demand, the model predicts a short fall of GPs in 2012 in the order of between 275 and 410. In short, without new interventions to increase the future supply of general practitioners in rural and remote NSW (ie interventions above and beyond those already in place), the current under supply of GPs will be dramatically worse in ten years. The model estimates that there will be a net increase in the number of rural and remote GPs in 2012, reflecting the success of recruitment and retention strategies introduced in the last decade and assuming that these will continue to be successful, particularly as longer term initiatives take effect. That the workforce shortage will, however, be worse in 2012 is due to the decrease in the average weekly clinical hours worked by GPs and an increased demand for their services as a result of population increases.

The Plan provides an introduction to medical workforce planning (Chapter 1) and the context for planning, both at the national level (Chapter 2) and for rural NSW (Chapter 3). The make up, distribution and qualities of the current general practice workforce in RRMA 3 – 7 are described in Chapter 4. The predictive modelling tools and the estimated supply of, and demand for, GP services in the year 2012 are described in Chapter 5. Chapter 6 discusses the issues raised during the course of seven community consultations held during 2003.

The final Chapter (Chapter 7) discusses the limitations of quantitative modelling but also the value of undertaking workforce planning. It argues that the plan provides a platform for addressing the future medical workforce shortage in three ways:

- By influencing national level planning being undertaken by AMWAC and by influencing national policy through the Department of Health and Ageing.
- By driving reform at the State level. The NSW Rural Doctors Network, through its activities and influence, can increase the number of GPs entering rural practice; reduce GP workforce loss; improve GP workforce productivity; improve workforce sustainability; and redesign workforce tasks.
- By highlighting the need for additional strategies over and above those already in place. It suggests the need for innovative recruitment and retention strategies to address the GP workforce under supply and gives some examples of these strategies.
Chapter 1: Rural Medical Workforce Planning

1.1 Introduction
As in other countries, rural and remote areas of Australia suffer from medical workforce shortages. Initiatives have been introduced to address the difficulties in recruiting and retaining rural and remote medical practitioners with strategies focussed on short, medium and long-term outcomes. The initiatives are designed to address both current rural and remote workforce needs and to attract potential "future" medical practitioners. The development by the Commonwealth of the Rural and Remote General Practice Program (RRGPP) and the funding of Rural Workforce Agencies (RWAs) in each state and the Northern Territory are examples of such initiatives.

1.2 Why is the NSW Rural Doctors Network involved in rural medical workforce planning?
The NSW Rural Doctors Network (RDN) is one of seven RWAs in Australia and is funded through Commonwealth and State government grants. Established as the "Rural Doctors Resource Network" in 1988, its goal is to support the provision and retention of adequate numbers of high quality, highly skilled health professionals in rural and remote New South Wales.

RDN’s funding agreement with the Commonwealth Department of Health and Ageing (DoHA) requires that RDN submits a rural medical workforce plan for NSW. RDN also sees the development of a Rural and Remote Workforce Plan as a valuable platform for addressing future GP under supply.

RDN is able to take a leading role in rural and remote medical workforce planning for the following reasons:

• RDN is currently able to provide a comprehensive analysis of the number, distribution and skills of GPs in practice in rural and remote areas in NSW. To ensure an appropriate supply of GPs for the future RDN needs to be able to plan for the future on the basis of the current analysis.

• The Australian key medical workforce planning body, the Australian Medical Workforce Advisory Committee (AMWAC), has acknowledged that it is unable to effectively undertake workforce planning to a level that is meaningful for rural and remote area planning. RDN, and other RWAs, are able to do this because of their local knowledge and networks – including data obtained from the Minimum Data Set (MDS). Robust data is essential for the development of a meaningful workforce plan.

• RDN is responsible for the carriage of many of the rural and remote medical workforce initiatives in NSW. RDN works in collaboration with other key stakeholders at both the statewide level and at local and regional levels with organisations such as rural Divisions of General Practice. RDN, working with other key stakeholders, currently reports on the likely effectiveness or otherwise of these initiatives (even those very long-term initiatives) as part of its reporting requirements. Consultation with stakeholders and practitioners is essential in the development of a meaningful plan.

• Finally, if assumptions underpinning current medical workforce planning are flawed, the recruitment and retention strategies that RDN is required to implement are unlikely to be effective.

1 The MDS is a national minimum data set developed by the RWAs in collaboration with the Commonwealth government to describe the workforce participation of GPs living in non-metropolitan Australia. Each RWA has developed a data collection tool to gather the required MDS data and to gather other information considered necessary to gain a greater understanding of the current GP workforce. The RDN database includes information on GP and community demographics, practice details, workforce participation details, rural origins and seeks some practitioner feedback about locums, leave arrangements etc.
1.3 Medical Workforce Planning

The provision of quality medical services to any community requires an adequate supply of a well trained workforce, backed by an appropriate standard of infrastructure. Determining this workforce supply in a robust and reliable way is the rationale behind workforce planning. (Horvarth et al, 1998)

The goal of medical workforce planning is “to ensure that all Australians have access to quality medical services appropriate to their needs”. Medical workforce planning is defined as ensuring that:

- the right number of medical practitioners are in the right place,
- at the right time,
- with the right skills to competently and proficiently perform the tasks expected of them in accordance with world’s best practice (Horvarth et al, 1998, p2).

Medical workforce planning attempts to answer questions such as:

- will there be enough medical practitioners in the future?
- how to determine the right number?
- how to improve the distribution of the medical workforce to meet (often changing) service requirements?
- what is the right mix of generalists versus specialists?
- how to determine the right number of training posts?
- what is the appropriate use of overseas trained doctors (OTDs) in areas of medical undersupply?
- how will the greater participation of women in the medical workforce affect future workforce supply and distribution?
- what are the training and education initiatives that are required to ensure that the medical workforce has the appropriate skills base?
- what are the effects of doctors wanting to work fewer hours/week?
- what are the effects of occupational health and safety concerns (eg the junior doctors “safe hours” campaign)?
- what are the effects of the global medical market on Australian medical workforce planning?

There will be external factors that can not be anticipated that affect future planning projections.

1.4 The Difference between Medical Workforce Planning and Service Planning

Workforce planning is trying to ensure the “right” number and mix of the workforce which has the right skills to provide appropriate (or high quality) services. The notions of right or appropriate are multi dimensional because they have relationships with many different things and raise issues such as:

- what is “needed” versus what might be “desired”;
- the “optimal” workforce versus what could be perceived as a “rationed” (by budget etc) workforce;
- the “traditional” care giver (eg doctor) versus a “substitute” health professional.

Service planning is about deciding what health services are where, when and how they are delivered, how they link with other services – in health and outside health (eg transport). It is about service delivery not about the health human resources required to provide the services (although of course these can’t be ignored, which is why service planning is linked to workforce planning). Service planning is generally done in (up to) five year projections.

Medical workforce planning is not done in a vacuum. Workforce planning

- doesn’t just boil down to simple numbers
- does need to connect with the whole of the health workforce, and
- obviously needs to connect/ reflect service planning.

Workforce planning has to date has been undertaken at the government level – ie it has focussed on the government “getting it right”. It has not successfully been done at regional and local levels. Yet both workforce planning and service planning can be done at any level – ie nationally, at the state level, regionally, at the health services level, divisional level, or with other designated population groups, or discipline specific or disease (or disease groupings) specific. To date

- workforce planning has been done by specific discipline at national and state levels (AMWAC) and
- service planning has been generally done by disease and population groupings – eg oncology services statewide; or at regional/ health services level eg clinical services for an Area Health Service.
Workforce planning requires a much longer projected time framework than service planning – there are only so many points at which change can be made. There is, for example, a minimum of a ten year outlook in Australia to take a first year medical student through to specialisation (eg in general practice). In other words, training the future workforce takes time. Because of the long lead times there has traditionally been a focus on services rather than focussing on the specific health care providers. Hence there can be a disjunction between workforce planning and service planning.

In Australia, (and elsewhere) service planning assumes notions of equity and accessibility and cultural and racial appropriateness. This can be the same for workforce planning. For example, workforce planning includes ensuring that the health workforce not just has the right skills mix to provide high quality care, but also, that there is an adequate reflection in the workforce of the gender, cultural and racial makeup of the population being cared for.

1.5 The Scope of the NSW Rural Medical Workforce Plan

The scope of the NSW rural and remote medical workforce plan is as follows:

- The plan will provide projections for the period 2002 to 2012.
- The plan is limited to general practitioners (GPs) defined as vocationally registered GPs, GPs in training, and non-vocationally registered doctors mainly working in primary care (also known as “other medical practitioners” or OMPS).
- The plan is will cover Rural, Remote and Metropolitan Areas Classification (RRMA) areas three to seven.

Rural NSW is diverse, comprising regional centres, large and small towns and remote communities. In this plan “rural” unless otherwise stated also includes regional and remote areas. It refers to those areas outside the Wollongong, Blue Mountains and Greater Newcastle triangle. More specifically “rural” is defined as those areas covered by the eight rural NSW Area Health Services (see Map 1), the upper sector of the Hunter Area Health Service and the lower sector of the Illawara Area Health Service. As well, the Wingecarribee Shire in the South West Sydney AHS and Lord Howe Island (administered by the South Eastern AHS) are considered rural.

With the exception of Queanbeyan in the Southern Area Health Service and small, densely populated areas in the lower Tweed Valley in the Northern Rivers Area Health Service, these rural areas all fall within RRMA 3 – 7 categories.

This definition of “rural” is consistent with the areas contained within the boundaries of the seventeen NSW rural Divisions of General Practice (see Map 2), (excluding the RRMA 2 areas of Tweed, South Eastern and Hunter Rural Divisions) and the NSW portions of the three divisions shared with Victoria (the Border, Murray Plains and Mallee Divisions of General Practice).

---

2 recognised as specialist general practitioners by the Royal Australian College of General Practitioners

3 The seven RRMA categories are: 1 – Capital Cities; 2 – Other Metropolitan Centres; 3 – Large Rural Centres; 4 – Small Rural Centres; 5 – Other Rural Areas; 6 – Remote Centres; 7 – Other Remote Areas. In NSW there are no areas in the RRMA 6 category.
Map 1: NSW Rural Area Health Services

- Greater Murray
- Macquarie
- Mid Western
- Metropolitan Health Service
- Northern Rivers
- New England
- Mid North Coast
- South West
- Far West

Key cities:
- Lismore
- Tamworth
- Dubbo
- Taree
- Queanbeyan
- Wagga Wagga
- Bathurst
- Broken Hill
1.6 Methodology

Medical workforce planning is a dynamic process best reviewed every two to three years. It is not an exact science. The methodology uses a range of standard workforce planning measures and involves a panel of experts. In Australia, medical workforce planning is evolving, particularly for rural and remote planning.

A Commonwealth/State Working Party (comprising representatives of the Rural Workforce Agencies, the Australian Rural and Remote Workforce Agencies Group and the Department of Health and Ageing) met during 2001 and 2002 to define the parameters and to guide the process for rural medical workforce planning. It was agreed that the methodology to be used by the RWAs would be based on that being used by the Australian Medical Workforce Advisory Committee (AMWAC) in its 2003 review of the national General Practice Workforce Study. The precise AMWAC model, was not in fact used, but the approach used by AMWAC was. This involves, at a general level, matching expected future workforce supply with expected future requirements and developing strategies to deal with any imbalance between the two.

The methodology is to:
- describe the current workforce including GP trainees (namely size, characteristics, distribution, skills and services provided);
- estimate workforce additions (or recruitment) and losses;
- assess the adequacy of the level of supply and distribution of the current medical workforce drawing on a range of “calculation” tools;
- project the workforce supply requirements for the period to 2012 using relevant indicators;
- project levels of workforce supply required to meet projected workforce requirements; and
- make recommendations (eg necessary adjustments to training program inputs, overseas doctor intake etc), within the projected timeframe and draw attention to any other pertinent issues raised as a result of the review.

The methodology for determining the adequacy of the current workforce and for projecting the future workforce requirements is described in Chapter 5.

1.7 Panel of Experts and Community Consultations

Medical workforce planning is enhanced by the use of a panel of experts and community consultations to provide additional input on what can realistically be expected to occur. The panel and the consultative groups are able to judge the strengths or weaknesses of the assumptions adopted into any projection modelling; to comment on the reliability of the data from various sources; to provide local or regional input; and to assist with identification of any gaps or flaws in the process.

In addition RDN has been assisted by rural Divisions of General Practice throughout the planning process.

The RDN expert panel is the Rural Medical Support Forum (RMSF). The RMSF already functions as the major advisory body to provide RDN with strategic advice and information on issues relating to the improved recruitment, retention and sustainability of the rural and remote medical workforce in NSW. The RMSF is chaired by the CEO of RDN and comprises representatives from the following organisations:
- Rural Doctors Network Board
- Rural Doctors Association, NSW
- Rural Divisions of General Practice
- Rural Medical Training Forum
- Country Women’s Association (NSW) representing consumers
- Local Government Shires Association
- Aboriginal Health and Medical Research Council
- NSW Department of Health
- Department of Health and Aged Care, NSW State office
- Rural Area Health Services – Directors of Clinical Services
- The RMSF co-opts other members as appropriate

Seven community consultations were held around NSW. These were sponsored by AMWAC (as part of its national review) and were extremely valuable to RDN in the development of this plan. The findings of the consultations are in Chapter 6. The consultations were held in Orange, with the RMSF in Sydney, Dubbo and Coffs Harbour in March 2003, Wagga Wagga and Tamworth in May 2003 and in Broken Hill in July 2003.
Chapter 2: The National Operating Environment

2.1 National Issues

General practitioners are the cornerstone of the Australian health system. For most Australians, access to the health system is through GPs. General practice provides a range of primary medical services and referrals to hospital, specialist, allied health and other complementary health services. Rural GPs also provide services in the hospital setting including in-patient care and procedural care (obstetrics, anaesthetics, surgery, trauma and medical emergencies).

GPs are facing growing pressure to deliver services in a complex and rapidly changing environment. Rural GPs are facing additional pressures as a result of working in remote or isolated settings. The services provided by rural GPs are critical to the delivery of rural and regional primary care and hospital services.

2.2 Australia’s Health System

Australia’s health system is a complex mixture of public and private services that involves policy direction, regulation and infrastructure by all three tiers of Government:

The Commonwealth Government funds medical services through the Medicare system, pharmaceutical benefits, health services to veterans, health services to Aboriginal and Torres Strait Islanders, and a range of other national health programs.

State and Territory governments have the major responsibility for the public provision of health services and for public health. The health services usually delivered by State and Territory health authorities (but sometimes delivered by community service departments or local government) are public hospital services (acute care and psychiatric, including admitted-patient services, outpatient clinics and emergency departments); mental health services; dental health services (including school dental services); infant health centres; health promotion and ill health prevention activities; community health centres; ambulance services; and regulation, inspection, licensing and monitoring of premises, institutions and personnel. Some services are funded by governments but delivered by non-government organisations or private providers (AIHW, 2002a, p240).

The health responsibilities of local governments vary from State to State, but are mainly in environmental control and in a range of community-based and home-care services. Piped water, sewage disposal and drainage are controlled by local government or by State-owned or local government-owned water utility corporations.

Australia’s Medicare system, the national insurance system, is designed to provide universal access to health services. While there is strong public commitment to the Medicare system, there is current debate within the federal government on its future direction.

Nearly nine million Australians or 44.9% of the population are also covered by private health insurance (Private Health Insurance Administration Council 2002 Annual Report cited in AIHW, 2002b).

Of the total national health expenditure of $60.8b in 2000 – 2001, the Commonwealth Government provided 47.5%, States and Local Governments 22.5%, Health Insurance funds 7.1%, other non-Government agencies 5.6% and individuals 17.3% of total funding. An average of $3,153 per person was spent on health services in Australia. Expenditure per person in NSW, Queensland, Western Australia and South Australia was lower than the national average (AIHW, 2002c, p.15, 22).
2.3 National Medical Workforce

Workforce shortages exist across a range of professions including medical specialists, GPs, nurses and allied health professionals. Estimates on the extent of the Australian medical workforce vary depending on data sources. There has, however, been significant change in the size and distribution of the Australian medical workforce. This has involved an underlying restructuring as a result of:

- Change in workforce composition with a rise in the proportion of female graduates, growth in the part-time workforce particularly for younger age groups and an ageing of the practitioner workforce.
- Change in workforce numbers including overall declining rates of GPs per population over the last 5 years. On an effective-full-time basis, allowing for part-time work the decline is more significant.
- Change in workforce practices including private practice industry restructuring towards larger practices (AMWAC, 2000, pp39, 8, 7, 2).

Between 1993 and 1998 the number of clinicians increased by 8.9%. The rate of growth has been, however, declining, falling from 3% in 1995 to 1.7% in 1998 (DHAC, 2001a, pp13, 87).

Estimates of the size of the GP workforce vary significantly (Table 1) depending on which definition of a GP, and which counting method, is used. The GP workforce is the largest component of the doctor workforce and is 45.3% of the Australian medical workforce (AIHW 1998).

2.3.1 Medical Specialist Services

The Australian Medical Workforce Advisory Committee (AMWAC, 2002) has concluded that while workforce supply and demand differs among the various medical specialties, the overall trend is a need for more specialists due to:

- increasing demand for services,
- the development of new areas of specialisation eg. emergency medicine,
- disciplines with a comparatively large cohort of practitioners moving to retirement eg. general surgery where 40% of workforce is over 55 years old
- disciplines with changing gender structure eg. obstetrics and gynaecology where 32% of workforce is aged over 55 and 55.3% are female trainees, and
- disciplines where current shortages of practitioners and trainees lead to problems attracting trainees eg. rehabilitation medicine, geriatric medicine and intensive care.

AMWAC states that there are emerging localised or overall shortages in medical specialties including anaesthesia, dermatology, general surgery, geriatric medicine, intensive care, obstetrics and gynaecology, and psychiatry (AMWAC Annual Report, 2001-02).

Table 1: Comparison of estimates of the size of the medical workforce as determined by three national organisations – Australian Institute of Health & Welfare (AIHW), Productivity Commission and Australian Bureau of Statistics (ABS)

<table>
<thead>
<tr>
<th>Australia</th>
<th>AIHW 19981</th>
<th>Productivity Commission 20022</th>
<th>Australian Bureau of Statistics 20023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Workforce</td>
<td>Numbers</td>
<td>Numbers</td>
<td>Numbers</td>
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<tr>
<td>Primary Care Practitioners/GPs</td>
<td>20 852</td>
<td>24 249</td>
<td>18 867</td>
</tr>
<tr>
<td>Total Specialists</td>
<td>16 490</td>
<td>10 509</td>
<td></td>
</tr>
<tr>
<td>Total Specialists in Training</td>
<td>4 473</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hospital non-specialists</td>
<td>4 263</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>46 078</td>
<td>29 376</td>
<td></td>
</tr>
<tr>
<td>GPs per 100,000 population</td>
<td>110.6</td>
<td>125.1</td>
<td>96.0</td>
</tr>
</tbody>
</table>

1. Based on State Medical Registration Boards survey data. AIHW defines Primary Care Practitioners as GPs, RACGP registrars and other medical practitioners whose main practice is unreferred patient attendances.

2. Based on unpublished DoHA and Health Insurance Commission 2000-01 data on GPs and Other Medical Practitioners (OMPs) billing Medicare. Source: Productivity Commission (2002), General Practice, Report on Government Services 2002, Canberra, p234. The report notes that “care needs to be taken in interpreting these head counts of doctors billing Medicare as not all OMPs are GPs. In addition, some GPs provide only small numbers of services attracting Medicare benefits and there are substantial numbers of doctors working in medicine part time.”

3. Based on ABS survey. The ABS surveyed qualified private GPs and specialists not including registrars.
2.3.2 National General Practice Workforce

In 1996, the Commonwealth Government introduced a range of initiatives to cap the growth in GPs including restrictions on provider numbers and limits on GP registrar numbers, which are currently 450 per annum, with 200 set aside for training in rural general practice. From 1997 to 2002, the total number of advanced vocational training positions in general practice decreased by 9.9% (a decrease of 159 trainees) (MTRP, 2002, p3). In the same period, however, there has been an increase in the number of first year training placements due to the increase in GP training positions from 400 to 450 in 2001 (MTRP, 2002, p31).

AMWAC’s 2000 report on the General Practice Workforce: Supply and Requirements 1999 – 2010, concluded that in 1998 in Australia there was a shortage of 1,240 GPs in rural and remote areas and an excess of approximately 2,300 GPs in metropolitan areas (AMWAC, 2000, pp 2, 87). The AMWAC modelling is based on a benchmark that workforce numbers in large rural centres are close to being in balance. This benchmark measure and the associated underlying assumptions have subsequently been challenged. AMWAC is currently revising its general practice workforce estimates to 2012.

Since 1996, there has been a decline in the practitioner to population ratios with a drop from 132.2 GPs per 100,000 population in 1996-97 to 123.3 GPs per 100,000 in 2001 – 2002. As a result, major shortages continue in many rural and remote areas and some outer urban areas, with anecdotal evidence of shortages in inner urban practices (Owens, 2002, p2, 3).

Recent research by Access Economics of GP Workforce Supply commissioned by the Australian Medical Association (AMA) found an overall shortage of GPs as well as a maldistribution (Pezzullo, 2002).

Concurrently, major restructuring within the general practice workforce is occurring including:

- Increasing participation of females in the GP workforce. The proportion of female GPs, nationally, has increased from 29% in 1994-95 to 33% in 2002, and this is expected to rise significantly as 50% of GPs under 44 are female (Owens, 2002, p2, 3).
- Increasing numbers of GPs choosing to work part-time. Sixty percent of female GPs are now working 39 hours or less and the number of male GPs choosing to work part-time has risen from 9% to 17% between 1995 and 2002 (Owens, 2002, p2, 3).

Table 2 summarises the data available on the rural and remote GP workforce. 1998 AIHW data indicates that 32% of primary care practitioners (4,666) work in Australia’s rural and remote areas (RRMAs 3 to 7). The Australian Rural and Remote Workforce Agency Group data collection based on GPs in RRMAs 4 to 7 found that there were 3,855 GPs in November 2002 (ARRWAG, 2003). The data sets produced by differing agencies are inconsistent in the definition of rural. In NSW, for example, regional centres (RRMA 3 locations) are included as rural whereas this is not the case in some other states eg Queensland. (This highlights the difficulty of accessing consistent data upon which to base workforce planning).

**Table 2: Australia: Rural and Remote GPs numbers, AIHW, Hirsch & Fredericks* and ARRWAG**

<table>
<thead>
<tr>
<th>State</th>
<th>AIHW 1998 RRMA 3-7</th>
<th>Hirsch 1999-2000* RRMA 3-7</th>
<th>ARRWAG Nov 2002 RRMA 4-7** (does not include RRMA 3 or ACT)</th>
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</tbody>
</table>

* GPs with at least one claim on Medicare and their major practice for the June quarter being in a rural area. (Hirsch & Fredericks in DHAC, 2001)

** Other RWAs collect data only for RRMA areas 4-7

Sources: see paragraph above Table 2.
Based on Medicare data, research conducted by Hirsch & Fredericks (DHAC, 2001a) (Table 3) indicates that the numbers of rural and remote GPs in Australia has increased in most States over the last five years. When considering the full-time equivalent number of GPs, however, the data indicates a decline in the full-time equivalent (FTE) number of GPs in NSW and Tasmania, slight increases in South Australia, Victoria, Northern Territory and Western Australia and the most increase in Queensland (DHAC, 2001a, p35).

Table 3: Number of rural GPs by State and Year

<table>
<thead>
<tr>
<th>State</th>
<th>1984-85 FTE</th>
<th>1989-90 FTE</th>
<th>1994-95 FTE</th>
<th>1999-00 FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW &amp; ACT</td>
<td>1,185</td>
<td>832.7</td>
<td>1,360</td>
<td>1,492</td>
</tr>
<tr>
<td>Vic</td>
<td>865</td>
<td>556.1</td>
<td>1,037</td>
<td>1,132</td>
</tr>
<tr>
<td>Qld</td>
<td>789</td>
<td>594.8</td>
<td>1,072</td>
<td>1,386</td>
</tr>
<tr>
<td>SA</td>
<td>359</td>
<td>210.3</td>
<td>372</td>
<td>406</td>
</tr>
<tr>
<td>WA</td>
<td>283</td>
<td>181.8</td>
<td>355</td>
<td>214.9</td>
</tr>
<tr>
<td>Tas</td>
<td>262</td>
<td>161.2</td>
<td>304</td>
<td>180.0</td>
</tr>
<tr>
<td>NT</td>
<td>46</td>
<td>13.8</td>
<td>90</td>
<td>19.2</td>
</tr>
<tr>
<td>Total</td>
<td>3,789</td>
<td>2,550.9</td>
<td>4,590</td>
<td>3,021.5</td>
</tr>
</tbody>
</table>

Note: Numbers and FTEs include RRMA 3 practitioners
Source: Hirsch and Fredericks in DHAC, 2001a

Compared with their metropolitan counterparts, Australian rural and remote areas have:

- Larger GP shortages – and the more remote the location, the larger the shortage. In 1998, the GP per 100 000 population ratio ranged from 66.1 in remote areas to 93.6 in small rural centres, whilst the metropolitan ratio was 122.7 (DHAC, 2000, p52).

- Proportionally fewer female GPs – The Australian Rural and Remote Workforce Agencies Group found that 28.4% of GPs in RRMA 4 to 7 were female (ARRWAG, 2003). AIHW data for 1998 indicates that 23.36% of medical practitioners in the rural medical workforce were female compared with 28.9% in metropolitan areas. Rural female medical practitioners, however, were more likely to be employed in primary care (69.5%) compared with medical specialities (10.8%) (AIHW, 2000).

- GPs working significantly longer hours. The recent Australian Bureau of Statistics (ABS, 2002) survey of private medical practitioners found that the average GP room hours worked (ie not including any hospital hours worked) for GPs were:
  - 46 hours in metropolitan areas
  - hours in rural areas
  - hours in remote areas

  The Australian average was 47 hours.

- Rural GPs provide a wider range of services and are on call more often, and when they are on call they are more likely to be called out (Britt et al, 1993, cited in General Practice Strategy Review Group, 1998). Rural GPs do much more procedural work than urban GPs.

- Older GPs who are carrying larger proportion of workload – Hirsch & Fredericks (in DHAC, 2001a, p36) note that over the past 15 years, the proportion of GPs aged 50 or more has risen from 28.0 per cent to 36.9 per cent, while the total GP workload carried by these GPs rose from 29.5 per cent to 40.6 per cent. As older GPs retire, they are replaced by GPs who prefer lighter clinical workloads and who are working part-time in greater proportions.

- More overseas trained doctors – The AIHW found that 24.5% of rural and 30.8% of remote medical practitioners gained their initial qualification overseas compared with 21.5% of all practitioners, with:-
  - 56.0% qualifying in the United Kingdom or Ireland
  - 15.6% in Asia
  - 9.0% in New Zealand
  - 18.8% in other countries (AIHW, 2000, p5).

- GPs in rural and remote areas very often have special relationships with their communities. This entails a greater expectation of confidentiality and probity on the one hand, and on the other, it entails limited privacy for these GPs and their families compared with what is expected in urban areas (White, 2002).
Table 4: General practitioner workforce: number of practitioners and practitioners to population, by geographic location and State/Territory, Dec 1998 (AMWAC 2000, p 35)

<table>
<thead>
<tr>
<th>State/Terr.</th>
<th>Capital City RRMA 1</th>
<th>Other Metro RRMA 2</th>
<th>Large Rural RRMA 3</th>
<th>Small Rural RRMA 4</th>
<th>Other Rural RRMA 5</th>
<th>Remote RRMA 6&amp;7</th>
<th>Total GPs</th>
<th>Total Rural Remote GPs</th>
<th>% rural remote</th>
<th>% Pop rural remote</th>
<th>GPs per 100,000 RRMA 3 to 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>4,983</td>
<td>780</td>
<td>315</td>
<td>414</td>
<td>556</td>
<td>32</td>
<td>7,080</td>
<td>1,317</td>
<td>18.6</td>
<td>24.4</td>
<td>84.6</td>
</tr>
<tr>
<td>Vic</td>
<td>4,078</td>
<td>202</td>
<td>246</td>
<td>277</td>
<td>505</td>
<td>9</td>
<td>5,316</td>
<td>1,037</td>
<td>19.5</td>
<td>24.4</td>
<td>90.9</td>
</tr>
<tr>
<td>Qld</td>
<td>1,920</td>
<td>549</td>
<td>546</td>
<td>212</td>
<td>327</td>
<td>87</td>
<td>3,640</td>
<td>1,172</td>
<td>32.2</td>
<td>41.1</td>
<td>81.9</td>
</tr>
<tr>
<td>SA</td>
<td>1,407</td>
<td>....</td>
<td>11</td>
<td>82</td>
<td>286</td>
<td>11</td>
<td>1,798</td>
<td>390</td>
<td>21.7</td>
<td>26.8</td>
<td>97.6</td>
</tr>
<tr>
<td>WA</td>
<td>1,450</td>
<td>....</td>
<td>....</td>
<td>105</td>
<td>128</td>
<td>139</td>
<td>1,821</td>
<td>372</td>
<td>20.4</td>
<td>26.7</td>
<td>75.4</td>
</tr>
<tr>
<td>Tas</td>
<td>318</td>
<td>....</td>
<td>117</td>
<td>49</td>
<td>104</td>
<td>5</td>
<td>593</td>
<td>275</td>
<td>46.4</td>
<td>58.7</td>
<td>99.5</td>
</tr>
<tr>
<td>NT</td>
<td>117</td>
<td>....</td>
<td>....</td>
<td>....</td>
<td>9</td>
<td>95</td>
<td>220</td>
<td>104</td>
<td>46.8</td>
<td>54.4</td>
<td>98.9</td>
</tr>
<tr>
<td>ACT</td>
<td>284</td>
<td>....</td>
<td>....</td>
<td>....</td>
<td>0</td>
<td>....</td>
<td>384</td>
<td>0</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Aust.</td>
<td>14,656</td>
<td>1,530</td>
<td>1,235</td>
<td>1,139</td>
<td>1,915</td>
<td>377</td>
<td>20,852</td>
<td>4,666</td>
<td>22.4</td>
<td>28.7</td>
<td>86.4</td>
</tr>
</tbody>
</table>

2.4 Assessing the adequacy of supply of GPs: GP to Population Ratios

GP to population ratios have been used as the benchmark for medical workforce to predict the desirable workforce size and composition (AMWAC, 1996, pxxi). GP to population ratios are also used by the Federal Government to determine whether localities are designated as Districts of Workforce Shortage to become eligible for additional GP services. Benchmarks in use are however, ‘consistently inconsistent’ as Table 5 indicates. Despite evidence that suggests that GP workforce shortages are increasing, the Commonwealth Government has been raising the benchmarks for assessment of rural GPs making it more difficult for rural towns to become eligible for District of Workforce Shortage status to recruit overseas trained doctors.

Table 5: Estimates of Primary Medical Care (GP) workforce by data source and measurement unit utilised

<table>
<thead>
<tr>
<th>Data Source Ratio (headcount)</th>
<th>Doctor/Population Equivalent (FWE)</th>
<th>Fulltime Workload</th>
<th>Fulltime Equivalent (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMWAC 1998</td>
<td>1:864</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DHAC 2000</td>
<td></td>
<td>1:1153</td>
<td></td>
</tr>
<tr>
<td>DHAC 2001 (Data file)</td>
<td></td>
<td>1:1076</td>
<td></td>
</tr>
<tr>
<td>Healthwiz 2000</td>
<td></td>
<td>1:1100</td>
<td></td>
</tr>
<tr>
<td>DHAC 2000</td>
<td>1:898</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMWAC 2000</td>
<td>1:904</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DHAC 2001</td>
<td>1:904</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DHAC 2000 (RLRP estimates)</td>
<td></td>
<td>1:1280</td>
<td></td>
</tr>
<tr>
<td>DoHA August 2002</td>
<td></td>
<td>1:1319</td>
<td></td>
</tr>
<tr>
<td>DoHA November 2002</td>
<td></td>
<td>1:1397</td>
<td></td>
</tr>
<tr>
<td>Productivity Commission 2002</td>
<td></td>
<td>1:1176</td>
<td></td>
</tr>
<tr>
<td>ABS 2002</td>
<td></td>
<td>1:1042</td>
<td></td>
</tr>
</tbody>
</table>

CDHAC – Commonwealth Department of Health and Aged Care; DoHA – Commonwealth Department of Health and Ageing
2.5 Future Environment: Trends in GP Services

There are considerable pressures on (both external to and within) the GP profession that point to future trends:

- Australia’s demographic makeup is changing significantly with an ageing of the population and falling birth rates. At 30 June 2001, there were an estimated 2.4 million Australians aged 65 and over, or 12.5% of the total population of 19.4 million. This represents a 22% growth since 1991 when there were two million older Australians. In 1991, 11% of the population was aged 65 and over (2.0 million) and by 2021 this is projected to increase to 18% (4.2 million). By 2051 it is expected that older Australians will comprise 25% of the population (6.5 million) (AIHW, 2002d, pp4, 5).

- It is not so much ageing as it is the cost of increasing quality in health that threatens to blow a hole in the nation’s public finances (AIHW, 2002d, pp4, 5). Nevertheless, a person’s use of health services tends to increase significantly in the last few years of their life. Access Economics estimates suggest that demographic effects (and resultant rising per capita utilisation) may add to health care costs the equivalent of 1.78 per cent of national output ($11.6 billion in 2000 dollars) by 2031 (Access Economics, 2001, pp41, 44).

- Aboriginal people continue to be significantly disadvantaged in accessing health services. Aboriginal people do not have the same access to GP services. The average number of GP services per head of population was 3.0 for Aboriginal people compared with 5.5 for non-indigenous Australians (AIHW, 2001a, pp16, 74). There is a marked difference in health status, mortality rates and usage of GP services between the two groups. In 1998-1999, 2.6% of the health budget was spent on Aboriginal health — a figure of $3,065 per person (AIHW, 2001a, pp16, 74). In the Aboriginal community, only 4% have private health insurance (1998-99) (AIHW, 2001a, pp16, 74). Despite increased Government expenditure in this area, Aboriginal people, the bulk of whom live in rural and remote areas continue to be significantly disadvantaged.

- Aboriginal and Torres Strait Islander people in Australia have significantly higher mortality and sickness rates than the non-indigenous population. In addition they are likely to live in regions remote from medical facilities and in poor physical conditions.

- Rural and Remote communities continue to be significantly disadvantaged in access to health services. Rural and remote Australians receive less Medicare benefits per capita compared with their urban and provincial counterparts. Medicare benefits paid for 1999 – 2000 these were:
  - $195.87 in urban areas;
  - $139.70 in rural areas; and
  - $83.11 in remote areas (DHAC, 2001a).

It also needs to be acknowledged that Medicare data underestimate usage of services in rural and remote areas because state provided community health services and Aboriginal Community Controlled Health Services are not necessarily reimbursed through Medicare. Additionally, data in relation to primary health care services provided by state, Aboriginal Community Controlled and Royal Flying Doctor Services do not fit neatly into measures of service provision as used by Medicare (HIC).

A further measure of Medical Benefits Schedule (MBS) outlays per capita is provided by the Department of Health and Ageing in its Annual Report 2001-2002 (DHAC, 2001b). Again, continuing inequities of access between rural and urban and between Indigenous and non-Indigenous communities are acknowledged. The report also notes that analysis by the Department of Health and Ageing indicates an inverse relationship between public hospital and MBS expenditure by local area, suggesting that public hospitals play an important role in providing services in areas where the private sector and MBS do not. Table 6 provides a breakdown of MBS outlays per capita by broad regional categories. The table includes all services rather than general practice services only.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital city</td>
<td>397.71</td>
<td>391.67</td>
<td>391.45</td>
<td>404.18</td>
<td>406.36</td>
<td>403.18</td>
</tr>
<tr>
<td>Other metropolitan</td>
<td>384.95</td>
<td>380.45</td>
<td>380.65</td>
<td>394.97</td>
<td>398.51</td>
<td>397.15</td>
</tr>
<tr>
<td>centre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural and remote</td>
<td>290.88</td>
<td>288.45</td>
<td>290.95</td>
<td>303.03</td>
<td>308.37</td>
<td>314.29</td>
</tr>
<tr>
<td>National Average</td>
<td>365.90</td>
<td>361.13</td>
<td>361.87</td>
<td>374.77</td>
<td>378.19</td>
<td>377.93</td>
</tr>
</tbody>
</table>

1. Non Farm GDP implicit price deflator used for earlier years.
3. The figures underlying this table are based on cash not accrual numbers in order to preserve the time series. The MBS numbers are based on claims processed during the year.
• National health expenditure is rising, placing increasing pressure on Governments to contain costs.

Spending on health has gradually increased over the past decade from 7.9% of Gross Domestic Product (GDP) in 1990 – 91 to 9% in 2000-01, with the increase attributed to increased use of health goods and services (Owens, 2002, pp7, 9).

Australian national spending on health, ranks just below average among a selected group of ten OECD countries. In 1999, total health expenditure as a proportion of GDP was Australia 9.0%, United States 13.0%, Germany 10.6%, Canada 9.1%, France 9.5%, and U.K 7.3% (AIHW, 2002c).

Commonwealth Treasury expects the upward trend in health expenditure to continue with estimates that expenditure could be as high as 19% of GDP by 2041 (Owens, 2002, pp7, 9).

The Productivity Commission notes that expenditure on medical services accelerated in the latter half of the 1990s and reports that the Commonwealth’s share of funding has increased significantly in a three year period from 44% in 1999 – 00 to 48% in 2001 – 2002. This is expected to continue to rise, due in part to the influence of uncapped programs – the Pharmaceutical Benefits Scheme and 30% private health insurance rebate (Owens, 2002, pp7, 9).

• Bulk billing rates for general practice services are falling, particularly in rural areas.

Medicare bulk billing rates for GP services have fallen substantially. Health Insurance Commission September 2002 data indicate that the proportion of medical services bulk-billed – where the patient faces no out-of-pocket costs – fell to 68.4% of medical services, the lowest level since the mid 1990s. The average patient contribution for patient billed services increased to $19.06, a rise of 8.8% in the previous 12 months. This creates an additional financial impost for the patient as unlike medical specialist services, patients do not have access to private health insurance to fill the gaps in general practice charges.

The rates of bulk billing are much lower in regional and rural Australia than in metropolitan areas. Young and Dobson, for example, studied the records of general practice consultations of 22,633 women over the period 1995 – 2001. For each age group, the use of bulk-billing was lower in rural areas than in urban areas. The average out of pocket cost per consultation for women in rural areas was higher than the cost for women living in urban areas. After adjusting for age, health and socioeconomic factors, women living in urban areas were more than twice as likely to have all their consultations bulk billed as women living in rural areas (Young and Dobson, 2003, pp 122 – 126).

The Australian Medical Association argues that the declining bulk billing rates are the result of inadequate rebates and high practice costs. The Commonwealth tends to view the below average bulk billing rates as an indicator of an under supply of doctors (DHAC, 2001a, p33).

• Major changes in technology and the health system are changing the way general practice is delivered.

Significant trends in the health system include:

• Advances in technology are changing the way medicine is practiced, eg. changed treatments, improved patient access via telehealth or computerisation of practices. Unlike the introduction of technology in other industries, technology in the health sector can lead to increased workforce specialisation (DHAC, 2001a, pp33, 9, 10, 54).

• Changing role of hospitals, particularly with a concentration on acute care and day surgery resulting in shorter average hospital stays.

• Increasing emphasis on community care with a broad range of services including pre and post-operative services and mental health services, provided in community settings including in the home (DHAC, 2001a, pp33, 9, 10, 54).

• Consumer demand for integrated or holistic services where care is coordinated with a range of service providers (DHAC, 2001a, pp33, 9, 10, 54).

• Higher levels of consumer education, where patients are increasingly partners in decision-making (DHAC, 2001a, pp33, 9, 10, 54). This has included growth in consumer demand for complementary or alternative health services.

• Rising awareness of adverse patient outcomes in the health system with estimates of 10% of people seeking care having an adverse outcome (DHAC, 2001a, pp33, 9, 10, 54). There has been substantial growth in medical indemnity insurance and the recent collapse of major indemnity insurers has introduced a great deal of uncertainty for practicing GPs.

• Sustained shortage of supply in some sectors of the medical workforce particularly in rural areas, not only of GPs but also medical specialists, nurses and allied health practitioners.

As a result of these trends:

• The role of GPs is changing with GPs assuming new and different clinical responsibilities. The shift of services and funding from hospitals to community-based services is expanding the role of GPs.

• Technological advances are changing the ways that GPs practice.

• GPs are coordinating with other health care professionals and adopting a team based approach to care. This approach is reflected in many university approaches to ‘problem based’ undergraduate medical training that is better suited to community-based, multi-disciplinary practice (DHAC, 2001a, pp9, 11).

• The threat of litigation has caused a significant number of doctors to change their medical practice, with some refusing to undertake high-risk procedures (DHAC, 2001a, pp9, 11). The decline in the number of GPs practising obstetrics is an example that has significant implications for the provision of rural obstetric services (Dunbabin, 2002).
2.6 Government Policy Responses

During the 1990s the Commonwealth Government made significant incremental reforms to the health system such as the private insurance rebate and changes to the Pharmaceutical Benefits Schedule (PBS) and MBS schedules.

Some policy analysts are proposing radical changes to the health system including reforms to the Medicare system and a shift away from fee for service payment arrangements to funding allocations per capita. Others are proposing new and different roles for GPs. One suggestion, for example, is to give GPs a budget for new high cost drugs for patients. Another, from Professor Stephen Duckett of Latrobe University, proposes an increased role for GPs as purchasers of medical and pharmaceutical services. He has suggested that MBS and PBS funds be pooled and held by Divisions of General Practice, and through the divisions, GPs purchase medical services and pharmaceuticals (Owens, 2002, p9).

In relation to workforce issues, the Commonwealth Government had introduced a range of incremental reforms including (DHAC, 2001a, pp9, 11):

- Capping the numbers of Australian medical students graduating from Australia’s universities (this policy was overturned in the 2003 federal budget announcements).
- Capping GP registrar trainees at 450 places, with 200 of these dedicated to rural placements (also overturned in the 2003 federal budget announcements).
- Issuing a moratorium on provider numbers in 1996 to restrict the growth in the number of GPs practicing4.
- Easing restrictions on Overseas Trained Doctors working in Areas of Need and introducing a Federal Government migration policy that shifted the focus from unskilled and refugee migration to skilled migration including doctors and nurses.

Governments also introduced a range of programs to facilitate rural doctor recruitment and retention. These include:

- Rural and Remote General Practice Recruitment Program – a Commonwealth Program designed to support the attraction, recruitment and retention of rural general practitioners. This program funds a significant proportion of RDN’s activities.
- The five-year program – a joint Commonwealth /State program which is designed to recruit GPs from overseas to work in Districts of Workforce Shortage in rural areas.
- Rural Locum Relief Program to assist rural communities affected by the provider number changes introduced in the 1996 budget. The program enables registered doctors to access Medicare benefits whilst working in general practice in eligible rural areas.
- Regionalisation of the General Practice Training Program – to increase the numbers of registrars in rural training schemes.
- Retention Grants – financial incentives for long-serving rural GPs.
- Divisions Program – a Commonwealth program to fund divisions of general practice to provide support, education and other services to GPs within their division.
- Rural Medical Family Support Scheme – a Commonwealth funded scheme designed to provide support to rural medical families and the Rural Medical Family Network, which is funded through Commonwealth and State funds.
- Medical Specialist Outreach Assistance Program – a Commonwealth Program to provide medical specialists with assistance to provide outreach or extended services to selected rural communities in need.
- More Allied Health Services Program – a Commonwealth Program to recruit additional allied health services to selected rural communities.

Despite these initiatives there are still protracted shortages in many medical workforce areas in rural and remote Australia, exacerbated by the trend of rural GPs towards working fewer hours.

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4 From 1 November 1996, the Commonwealth Government limited the issue of Medicare provider numbers to doctors who were recognised as medical practitioners in Australia prior to 1 November 1996. From this date Australian trained doctors have been required to be on recognised postgraduate training programs or be fully recognised as specialists in order to be granted provider numbers. A ten-year moratorium was placed on doctors from overseas who had not been registered in Australia before 1 January 1997. This means that doctors must practice for ten years before they can be granted provider numbers to attract Medicare rebates for their patients. There are exemptions to this limitation if doctors are prepared to practice in under served rural or remote areas.
2.7 Challenges of attracting and keeping rural GPs

While there are many changes and programs that have helped reduce the isolation of rural GPs and increase support to rural GPs, the rural GP workforce is vulnerable to a range of factors including:

- Younger GPs and medical students have been increasingly stating that they wish to work in an employment environment where they can concentrate on their practice of medicine rather than small business administration. In NSW, RDN has developed medical practice models that help to remove the burden of administration without compromising professional and clinical independence. The Rural and Remote Medical Services project in north west NSW, for example, has led to a substantial increase in both the number of resident GPs and the number and range of medical services.

- Sustainability of the community and practice – Monash University research into sustainable models of general practice identified many risk factors to the sustainability of general practice services in rural communities. These include the background, skills and training of practitioners, the demands of practice, level of support available to the practitioner and his or her family, financial arrangements of the practice including medico-legal constraints, nature of the community, the services to be provided, the economic viability of the community and health service environment (DHFS, 1998).

- Changes in Federal, State Government and Area Health Services policy – health system funding or area management decisions that reduce or increase local hospital or health service provision in rural areas. Closures or re-gradings of hospitals are the most obvious, often leading to the loss of GPs or the closure of GP services. Decisions to centralise services, for example, to close theatres in hospitals or fly emergency patients to larger provincial cities for services rather than invest in local services will also affect the long-term sustainability of GP services.

- The loss of the GP workforce or the failure to recruit suitable GPs to rural communities will increase the patient loads, the hours worked by practitioners, and stresses faced by practitioners. High workloads remain a major concern for rural GPs and a disincentive for recruiting new GPs.

- The level of community and workforce support available for GPs and their families. Many local communities and local governments have invested in developing infrastructure and providing financial and other assistance to attract GP services. The Federal and State Governments have invested substantial funding to support the retention of GP services, including retention grants, locum, professional development and family support. The level of support is a significant indicator.

2.8 Health Status of Rural and Remote Residents

The health status of rural Australians declines with distance from metropolitan and regional centres. Mortality rates are higher in rural areas, reflecting in part the higher proportion of Indigenous Australians in rural areas (DHAC, 2001a). Rural Australians, when compared with metropolitan residents have:

- higher rates of premature death from injury or accidents particularly among men,
- higher rates of road injuries and fatalities,
- higher mortality related to coronary heart disease, diabetes and asthma,
- higher rates of hospitalisation and death from falls or burns among people over 65 years,
- in remote areas, higher incidence of low birth rate and infant mortality,
- lower incidence of early cancer detection,
- higher rates of obesity, higher alcohol intake in small rural centres and higher rates of smoking in remote areas among rural women,
- suicide, depression and other mental health problems, with suicide rates among men noticeably higher in rural areas compared with metropolitan areas. As well,
- death rates from road injury increase with increasing remoteness; and
- death rate from ischaemic heart disease is higher among those who live in very remote areas compared with those living in more accessible areas.
2.9 Aboriginal and Torres Strait Islander Peoples’ Life Expectancy and Health

Aboriginal and Torres Strait Islander people continue to suffer a greater burden of ill health than the rest of the population (ABS, 2001). Life expectancy at birth for Aboriginal and Torres Strait Islander people is significantly lower than for the non-indigenous population. Over the period 1997-99, the life expectancy at birth for an Indigenous male was 56 years, compared with 76 years for males in the total Australian population. Similarly, the life expectancy for an Indigenous female at that time was 63 years compared with 82 years for females in the total Australian population (ABS, 2001).

Hospital data indicate that Indigenous people are more likely than other people to be hospitalised for most diseases and conditions and to suffer from higher levels of many mental and behavioural disorders. Kidney disease and diabetes are common diseases in the Indigenous population.

There is evidence that the disparity between Indigenous and non-Indigenous health, at least measured by mortality, has widened in recent years. The lack of real improvement in Indigenous mortality in Australia contrasts markedly with the situation among Indigenous people in New Zealand, Canada and the United States. The success achieved in those countries “generates considerable confidence that effective action in Australia will produce substantial changes in Indigenous health” (Ring and Firman, 1998). Achievement of these changes will require progress in five areas: infrastructure (including physical environment and socioeconomic aspects); self-determination of health services; access to a network of community-controlled primary healthcare services; an adequate level of resources; and a skilled workforce (Ring and Firman, 1998).
Chapter 3: NSW Operating Environment

3.1 Rural NSW

Twenty four percent of the State’s population lives in regional, rural or remote NSW (RRMA 3 – 7). Rural people live in a diversity of localities – regional centres, large towns, small towns and remote localities. They live in areas ranging from the more densely populated coastal areas to the inland and sparsely populated areas. The Australian Bureau of Statistics (ABS) estimated that the NSW population in 2000 was 6,464,044. The estimated rural resident population for the same year residing in RRMA 3 – 7 categories was 1,556,214 (24.1%). Parts of NSW, particularly the Northern Rivers and Mid North Coast regions, are experiencing population increases above the State average (19% by 2011), while the Far West region has an anticipated population decrease of 11% over the next ten years. Some regional centres, for example, Dubbo and Wagga Wagga, are experiencing population increases as a result of migration from the smaller, surrounding communities.

Rural NSW is characterised by:
- areas of small diverse populations,
- areas of geographic isolation,
- difficulties in accessing public transport,
- shortages of medical, nursing and allied health professionals,
- great socioeconomic disparities,
- poorer health status than people in metropolitan areas, and
- an ageing population (as in the rest of Australia).

Rural populations are ageing as young adults are leaving to find employment and study in the bigger centres and cities. Many older people are relocating from small towns or properties to larger rural towns for easier access to health services. Many retirees from metropolitan areas are moving to the coastal areas of rural NSW. The age and sex of the population is important in determining the likely demand for primary health care services. The age breakdown of the population is broadly similar for each RRMA (see Table 7). Over all, approximately half the population is aged over 35 years, with the over 65s making up around 15%.

Table 7: Estimated Population by RRMA in Rural and Remote NSW

<table>
<thead>
<tr>
<th>Estimated Resident Population</th>
<th>RRMA3</th>
<th>RRMA4</th>
<th>RRMA5</th>
<th>RRMA7</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years (% female)</td>
<td>23483 (50)</td>
<td>28323 (49)</td>
<td>47524 (49)</td>
<td>4376 (48)</td>
<td>103706 (49)</td>
</tr>
<tr>
<td>5-9 years (% female)</td>
<td>25639 (50)</td>
<td>34048 (49)</td>
<td>55264 (49)</td>
<td>4742 (49)</td>
<td>119639 (49)</td>
</tr>
<tr>
<td>10-14 years (% female)</td>
<td>26730 (48)</td>
<td>34823 (49)</td>
<td>56871 (49)</td>
<td>4240 (49)</td>
<td>122664 (49)</td>
</tr>
<tr>
<td>15-19 years (% female)</td>
<td>27708 (50)</td>
<td>32242 (48)</td>
<td>48483 (48)</td>
<td>3306 (47)</td>
<td>111739 (49)</td>
</tr>
<tr>
<td>20-24 years (% female)</td>
<td>23985 (51)</td>
<td>23683 (47)</td>
<td>31644 (47)</td>
<td>3060 (45)</td>
<td>82372 (48)</td>
</tr>
<tr>
<td>25-34 years (% female)</td>
<td>44260 (51)</td>
<td>51493 (50)</td>
<td>78151 (50)</td>
<td>7760 (48)</td>
<td>181664 (50)</td>
</tr>
<tr>
<td>35-44 years (% female)</td>
<td>49898 (51)</td>
<td>64958 (50)</td>
<td>107644 (50)</td>
<td>8526 (46)</td>
<td>231026 (50)</td>
</tr>
<tr>
<td>45-54 years (% female)</td>
<td>44133 (50)</td>
<td>58822 (50)</td>
<td>99544 (48)</td>
<td>7123 (44)</td>
<td>209622 (49)</td>
</tr>
<tr>
<td>55-64 years (% female)</td>
<td>31278 (51)</td>
<td>45796 (50)</td>
<td>78290 (49)</td>
<td>5601 (44)</td>
<td>160965 (50)</td>
</tr>
<tr>
<td>65-74 years (% female)</td>
<td>25357 (53)</td>
<td>40072 (52)</td>
<td>62517 (49)</td>
<td>3915 (45)</td>
<td>131861 (51)</td>
</tr>
<tr>
<td>75+ years (% female)</td>
<td>21427 (62)</td>
<td>31227 (59)</td>
<td>45747 (58)</td>
<td>2501 (56)</td>
<td>100902 (59)</td>
</tr>
<tr>
<td>Total</td>
<td>343898</td>
<td>445487</td>
<td>711679</td>
<td>55150</td>
<td>1556214</td>
</tr>
</tbody>
</table>

Source: ABS Census 1996
The data available about Aboriginal and Torres Strait Islander people are limited by the extent to which Indigenous people are included in national surveys, the accuracy with which they are identified in surveys and administrative datasets, uncertainties about Indigenous population estimates, and concerns about whether the survey methods employed are always the most suitable. It is also difficult to point to trends with confidence because the availability and quality of data about the Indigenous population have varied considerably over time (ABS, 2001).

At the 2001 Census, however, the Indigenous population in NSW numbered 120,047, or 29% of the national Indigenous population and 1.8% of the NSW population as a whole. At the 2001 Census, the Indigenous population in rural NSW was 78,719 (see Table 8) and constituted 4% of the rural population. The Aboriginal and Torres Strait Islander population is not distributed evenly across rural NSW either in terms of numbers or the proportion of the general population.

### Table 8: Population of Aboriginal and Torres Strait Islander in Rural Divisions of General Practice in NSW

<table>
<thead>
<tr>
<th>Rural NSW Division of General Practice</th>
<th>Population: Aboriginal or Torres Strait Is (numbers)</th>
<th>Aboriginal or Torres Strait Is (%) of total population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter Rural</td>
<td>7,444</td>
<td>3.1%</td>
</tr>
<tr>
<td>Shoalhaven</td>
<td>3,431</td>
<td>4.1%</td>
</tr>
<tr>
<td>South East NSW</td>
<td>4,469</td>
<td>2.5%</td>
</tr>
<tr>
<td>Hastings Macleay</td>
<td>3,954</td>
<td>4.4%</td>
</tr>
<tr>
<td>Mid North Coast</td>
<td>4,983</td>
<td>4.1%</td>
</tr>
<tr>
<td>Northern Rivers</td>
<td>5,498</td>
<td>3.6%</td>
</tr>
<tr>
<td>Tweed Valley</td>
<td>2,030</td>
<td>2.8%</td>
</tr>
<tr>
<td>New England</td>
<td>3,872</td>
<td>6.1%</td>
</tr>
<tr>
<td>Riverina</td>
<td>3,689</td>
<td>3.0%</td>
</tr>
<tr>
<td>NSW Central West</td>
<td>7,191</td>
<td>4.4%</td>
</tr>
<tr>
<td>Dubbo Plains</td>
<td>9,695</td>
<td>10.7%</td>
</tr>
<tr>
<td>Barwon</td>
<td>6,189</td>
<td>12.8%</td>
</tr>
<tr>
<td>Murrumbidgee</td>
<td>2,547</td>
<td>4.2%</td>
</tr>
<tr>
<td>NSW Outback</td>
<td>4,997</td>
<td>34.2%</td>
</tr>
<tr>
<td>Southern Highlands</td>
<td>559</td>
<td>1.3%</td>
</tr>
<tr>
<td>North West Slopes</td>
<td>3,638</td>
<td>6.6%</td>
</tr>
<tr>
<td>Barrier</td>
<td>2,086</td>
<td>9.7%</td>
</tr>
<tr>
<td>Border</td>
<td>1,087</td>
<td>1.7%</td>
</tr>
<tr>
<td>Murray Plains</td>
<td>530</td>
<td>2.6%</td>
</tr>
<tr>
<td>Mallee</td>
<td>830</td>
<td>9.2%</td>
</tr>
<tr>
<td>Total</td>
<td>78,719</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Note: data does not include unincorporated Far West or Lord Howe Island
Source: Based on ABS 2001 Census
3.2 Health Status


The health status for rural and remote residents of NSW reflects the national picture. Across Australia, people living in rural and remote areas have worse health generally than those living in metropolitan areas (Report of the NSW CHO, 2002, p119). Many factors contribute to this differential, including geographic isolation, socioeconomic disadvantage, shortage of health care providers, greater exposure to injury risks, and Aboriginal health needs (AIHW, 1998). Aboriginal people make up an increasing proportion of the population in NSW with increasing remoteness, and comprise almost half of the population of ‘very remote’ areas.

Compared with people who live in ‘highly accessible’ areas in NSW, people who live in ‘remote’ or ‘very remote’ areas:

- can expect to live six years less (males) or four years less (females). In NSW in the period 1996 to 2000, life expectancy at birth decreased with remoteness. For males it ranged from 71.6 years in ‘remote’ and ‘very remote’ areas combined, to 76.7 years in ‘highly accessible’ areas. In females, the corresponding range was 78.2 years to 82.3 years. Aboriginal people make up almost 7% of the population of ‘remote’ and ‘very remote’ areas, but the overall life expectancy in these areas is still considerably above the estimated life expectancy for Aboriginal residents of NSW – 56.3 years for males and 63.6 years for females. (Report of the NSW CHO, 2002, p122).

- are more likely to die from causes classified as ‘avoidable’. In NSW in the period 1996 to 2000, the death rate from ‘avoidable’ causes increased with remoteness, and was 3.0 times higher in ‘very remote’ areas than in ‘highly accessible’ areas. Similar gradients were observed when avoidable deaths were further partitioned into ‘primary’ avoidable deaths (preventable through individual and population-based preventive interventions), ‘secondary’ avoidable deaths (conditions amenable to early detection and intervention) and ‘tertiary’ avoidable deaths (conditions amenable to medical or surgical treatments). Death rates from these causes were all more than three times higher in ‘very remote’ than in ‘highly accessible’ areas. The death rate from causes classified as ‘unavoidable’ also increased with remoteness, though less dramatically. The death rate from these causes was 2.4 times higher in ‘very remote’ areas than in ‘highly accessible’ areas. (Report of the NSW CHO, 2002, p124)

- report fewer consultations with general practitioners and more visits to hospital emergency departments. Patterns of health service use reflect not only patterns of illness, but differences in the availability and accessibility of health services and in the way people choose to use them. Hospital admission rates are higher among residents of remote areas than residents of capital cities, due to higher rates of medical admissions. Use of general practitioner and emergency department services also varies with remoteness.

At the 1997 and 1998 NSW Health Surveys, the proportion of respondents reporting that they had consulted a general practitioner in the previous two weeks decreased with remoteness. One in five (19.7%) people living in ‘very remote’ areas reported a consultation, compared with one in four (24.6%) people living in ‘highly accessible’ areas.

A different pattern was seen for emergency department visits within the past 12 months, which were more likely to be reported with increasing remoteness. People living in ‘very remote’ areas (25.6%) were more than twice as likely as those living in ‘highly accessible’ areas (12.4%) to report an emergency department visit. (Report of the NSW CHO, 2002, p132)

- are more likely to be hospitalised for conditions for which hospitalisation can be avoided through prevention and early management.

Ambulatory care sensitive conditions are those for which hospitalisation is thought to be avoidable through prevention and/or early disease management. Primary care services are non-acute services focusing on primary prevention and early intervention. Hospitalisation rates for ambulatory care sensitive conditions are used as an indicator of access to, and quality of, primary care (Victorian Government Department of Human Services, 2001, quoted by the CHO). However, other factors also influence variations in hospitalisation rates for these conditions, including the prevalence of the condition, hospital admission practices, and personal choices about seeking health care. The ambulatory care sensitive conditions considered here include influenza and pneumonia, asthma, congestive heart failure, diabetes complications, chronic obstructive pulmonary disease and dental conditions. In NSW in the financial year 1999-00, hospitalisation rates for ambulatory care sensitive conditions increased dramatically with remoteness, and were almost seven times higher among residents of ‘very remote’ areas compared with residents of ‘highly accessible’ areas.

Hospitalisation rates for all other conditions also increased with remoteness, though less markedly. Hospitalisation rates for these conditions were almost three times higher among residents of ‘very remote’ areas compared with residents of ‘highly accessible’ areas.
The major factors contributing to these gradients are likely to include the higher prevalence of many health conditions among Aboriginal people, and a greater propensity to admit to hospital people who come from remote areas, so that they do not have to repeatedly travel long distances to receive care. The more pronounced gradient seen for ambulatory care sensitive conditions than for other conditions reflects barriers to accessing primary care in remote areas. These include geographic isolation, transport difficulties, and shortages of general practitioners and other primary health care workers. Socioeconomic barriers may also exist, for example if no bulk-billing general practitioner is available. (Report of the NSW CHO, 2002, p126)

- are more likely to die from injury and poisoning.
  In NSW in the period 1996 to 2000, the death rate from injury and poisoning was 2.6 times higher in 'very remote' areas than in 'highly accessible' areas. Death rates tended to increase with remoteness for many injury causes, including motor vehicle crashes, suicide, drowning, burns and scalds, interpersonal violence and gun-related deaths. There was no clear trend with remoteness for deaths due to falls or poisoning. Particularly marked gradients with increasing remoteness were observed for deaths caused by motor vehicle crashes and gun-related injuries. (Report of the NSW CHO, 2002, p128)

- are more likely to die in motor vehicle crashes.
  Residents of 'very remote' areas were almost three times more likely to die as a result of motor vehicle crashes than residents of 'highly accessible' areas. Most (85.3%) of those who died in motor vehicle crashes in 'remote' and 'very remote' areas were males, and almost half (47.1%) were aged less than 25 years. Death rates due to both road traffic and non-road traffic (that is, occurring in places other than a public road) crashes increased with remoteness. Non-road traffic crashes contributed a greater proportion of motor vehicle crash deaths in 'remote' or 'very remote' areas (17.6%) than in 'highly accessible' areas (3.9%). Of the road traffic crashes recorded by the NSW Roads and Traffic Authority (RTA) in 2000, almost one-third (31%) occurred on country roads, and these accounted for 58% of all fatal crashes. Almost two-thirds of fatal crashes on country roads occurred on stretches where the speed limit was 100 kilometres per hour or more (RTA, 2001 quoted by CHO). (Report of the NSW CHO, 2002, p128)

- are more likely to die from gun-related injuries.
  Residents of 'very remote' areas were 10 times more likely than those in 'highly accessible' areas to die from gun-related injuries. Almost all (95.4%) those who died from gun-related injuries in 'remote' and 'very remote' areas were males. Rates of gun-related homicide, suicide and accidental death all increased with remoteness. Accidental deaths made up a greater proportion of gun-related deaths in 'remote' or 'very remote' areas (13.6%) than in 'highly accessible' areas (5.4%). The opposite was true for homicides, which comprised 26.9% of gun-related deaths in 'highly accessible' areas, and 18.2% of gun-related deaths in 'remote' or 'very remote' areas. (Report of the NSW CHO, 2002, p128)

- are more likely to be hospitalised for coronary heart disease.
  Hospitalisation rates for coronary heart disease in the five year period 1995-96 to 1999-2000 were highest among people living in 'remote' and 'very remote' parts of NSW, and lowest among those living in 'moderately accessible' areas. Variations in the incidence of coronary heart disease reflect differences in levels of risk factors such as smoking, obesity and consumption of high fat foods. Hospitalisation rates for revascularisation procedures also varied with remoteness. The ratio of separations for revascularisation procedures to total coronary heart disease separations decreased with remoteness, from 0.21 for people living in 'highly accessible' areas to 0.11 for people living in 'very remote' areas. Lower values for this ratio in more remote areas may relate to lesser severity of disease among people who are hospitalised, as well as lesser access to cardiac surgery services. (Report of the NSW CHO, 2002, p130)
3.3 GP Services and Practice Types in NSW

In rural and remote NSW, GPs comprise approximately 70% of the medical workforce and provide care:

- in their practices as private practitioners (fees rebateable through the Health Insurance Commission and thus a charge against the Commonwealth); and
- they provide inpatient and outpatient hospital care in State government funded public hospitals. For this work they are paid by the Area Health Service in which the hospital is located. This is thus a charge to the State government.
- Additionally there are GPs who work as employees of organisations and are remunerated through a range of different salary/fee for service arrangements.

In NSW the Rural Doctors Association (RDA), NSW is the industrial and political advocate for rural and remote GPs. In July 1988 RDA, NSW and the NSW Department of Health agreed on a new fee for service arrangement for GPs working as Visiting Medical Officers (VMOs) in the rural hospitals. This arrangement is enshrined in the NSW Rural Doctors Settlement Package and covers approximately 130 hospitals. Obstetrics and anaesthetics incentive grants were added to the package in 1993/94. The RDA, NSW, has been very effective in establishing and maintaining continuity of liaison between the RDA, NSW and NSW Department of Health. The continued negotiation on the RDA Settlement Package is one of the most positive things contributing to continuity in the rural GP workforce and is a tribute to both organisations. More recently RDA, NSW has been successful, with RDN, in obtaining 30 new procedural training positions for GPs per annum over the next three years.

Table 9: Variation in practice size by RRMA in NSW, November 2002

<table>
<thead>
<tr>
<th>Practice size 1-2 GP (%)</th>
<th>Practice size 3-6 GPs (%)</th>
<th>Practice size &gt;6 GPs (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All RRMAs 3-7</td>
<td>66</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>RRMA 3</td>
<td>58</td>
<td>32</td>
<td>10</td>
</tr>
<tr>
<td>RRMA 4</td>
<td>60</td>
<td>33</td>
<td>7</td>
</tr>
<tr>
<td>RRMA 5</td>
<td>71</td>
<td>24</td>
<td>5</td>
</tr>
<tr>
<td>RRMA 7</td>
<td>85</td>
<td>19</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: RDN Database 30th November 2002, size of practice based on head count not on full time equivalents

3.3.1 Practice types

In rural and remote NSW (RRMA 3 – 7) 66% of all practices are either solo or two doctor practices (RDN database, 30th November 2002). A further 28% comprise three to six doctors and only 6% comprise more than six doctors (head counts, not full time equivalents). The lowest proportion of solo or two doctor practices are in RRMA 3 (58%), followed by RRMA 4 (60%), and RRMA 5 (71%) (Table 9). Fewer than 10% of doctors work in practices with more than six doctors (0% in RRMA 7).
3.3.2 Aboriginal Community Controlled Health and Medical Services

NSW’s Aboriginal and Torres Strait Islander population is serviced by a combination of mainstream services, RFDS and Aboriginal Community Controlled Health Services (ACCHS). Those ACCHSs with GPs in rural NSW are generally referred to as Aboriginal Medical Services and include the following:

- Armidale
- Biripi (Taree)
- Bourke
- Bulgarr Ngaru (Grafton)
- Condobolin
- Coomealla (Dareton)
- Cummeragunja (Moama)
- Dharah Gibinj (Casino)
- Durri (Kempsey)
- Galambila (Coffs Harbour)
- Griffith
- Katungul (Narooma)
- Nambucca (Macksville)
- Pius X (Moree)
- Riverina (Wagga Wagga)
- South Coast (Nowra)
- Thubbo (Dubbo)
- Tobwabba (Forster)
- Walgett
- Wellington
- Yoorana-Gunya (Forbes)

Aboriginal Community Controlled Health Services provide a range of health-related services as well as transport to medical appointments. Aboriginal Community Controlled Medical Services (AMSS) provide primary health care services, including medical services for which patients are bulk billed. To do so, the AMSS utilise general practitioners salaried by the service as well as private medical practitioners who provide sessions at the AMSS, and for which they bulk bill. GPs providing services under either arrangement are eligible for rural retention payments once they meet the eligibility criteria.

AMSS across NSW are moving toward accreditation although their medical services do not readily fit the private business model for which accreditation was mainly designed. Accredited services are able to apply for relevant Practice Incentive Payments. The peak body for AMSS and AHSs in New South Wales is the Aboriginal Health and Medical Research Council, although membership is voluntary. Indigenous-specific health and medical services are also provided through the NSW Department of Health.

3.3.3 Overseas Trained Doctors

It is possible for temporary and permanent resident overseas trained doctors to gain conditional registration to work in areas of workforce under supply in NSW through NSW Medical Board changes to the requirements for conditional area of need (AoN) registration in May 1999. The changes made the assessment process the same for all OTDs seeking conditional AoN registration, regardless of their residency status and the country in which they obtained their primary medical degree (except New Zealand)\(^1\). There are no time limits to this level of registration but applicants must continue to satisfy the conditions of their registration. There is a formal application process through the NSW Department of Health to have a medical vacancy approved as an ‘area of need’ position. The AoN status is attached to the position for a set period of time, which may be extended on application.

To be granted conditional AoN medical registration, the doctor must demonstrate clinical competency for the nominated position in an interview. The interview panel, comprising representatives from the RACGP, NSW RDN and the Australian College of Rural and Remote Medicine (ACRRM) is appointed by, but remains separate from, the Medical Registration Board. The Interview Panel makes its recommendations to the Medical Board which has the final decision.

In September 2000, NSW Health and the Commonwealth Department of Health and Aged Care introduced the Five-Year Program for overseas trained doctors. This scheme is designed to attract highly skilled overseas-trained general practitioners by offering support for permanent residency for doctors able to obtain Fellowship of the RACGP within two years and a five-year reduction on the provider number moratorium. Permanent Resident Overseas Trained Doctors (PRODTs) are also eligible to apply for the program. While PRODTs already have Australian residency or citizenship, it is attractive to them because it reduces their provider number moratorium from ten years to five years. The doctors must work in designated towns (more than 100 kms from the coast) for a minimum of five years and must obtain Fellowship of the RACGP within two years. At 1st March 2003, nineteen doctors were enrolled in the Five-Year Program. NSW Health Department Information Bulletin 2001/15 provides more information about the scheme.

RDN has introduced a recruitment scheme called the Targeted Inland Recruitment Scheme (TIRS) that provides a package for GPs recruited through RDN onto the Five-Year Program.

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\(^1\) Doctors with a primary medical degree from a New Zealand medical school accredited by the Australian Medical Council are eligible for full medical registration in NSW.
International Postscript:

There is a recognised worldwide shortage of general practitioners/family physicians with only a handful of countries (eg Spain) producing more doctors than they need. A number of countries, most notably the UK and Canada, are actively recruiting overseas GPs into their health systems. There has been considerable international debate about the ethics of developed countries poaching doctors from less developed countries. While an individual doctor of course has the right to seek work in another country, active overseas recruitment is discouraged by many medical organisations and states. In July 2002 the RDN Board adopted a code of conduct for the recruitment of overseas (temporary visa) doctors which reflects the principles of the Code of Practice for the International Recruitment of Health Care Professionals adopted at the WONCA World Rural Health Conference in Melbourne in May 2002.

3.3.4 Procedural General Practitioners

In 2001 RDN surveyed GPs engaged in procedural medicine in NSW RRMA areas 4-7 (Dunbabin, 2002). It found two significant barriers to the extent to which GPs are involved in procedural work: the downgrading of rural hospitals in favour of larger centres, which are more likely to have specialists; and a fear of litigation combined with the high cost of indemnity insurance. The latter is discouraging some GPs (and specialists) from carrying out procedural work, particularly where the number of procedures per year is not high. Other barriers identified for obstetricians include lifestyle and family, not enough deliveries to maintain skills and exhaustion from night and day work. Appropriate training and retraining opportunities together with appropriate remuneration and indemnity arrangements have been identified as barriers to GPs obtaining and using their anaesthetics skills. The importance of appropriate, high level initial training for GP proceduralists has also been stressed. Although there are very few published studies relating to procedural medicine in rural NSW there is a perception that the number of procedural GPs is dropping and not enough replacements are being trained. RDN has surveyed the existing procedural workforce to establish numbers of GPs practicing advanced procedural skills, activity levels, attitudes to specialist services and training, career intentions, and barriers to continued practice of procedural medicine. (See Chapter 4.1.9 for the analysis of the survey findings).

3.3.5 Female General Practitioners

With the increasing representation of females in the medical workforce and with an ongoing rural medical workforce shortage RDN believes that it is critical to have recruitment and retention strategies in place in NSW to suit the diversity of medical practitioners, male and female. During 2000 RDN surveyed female and male general practitioners and female specialists working and residing in rural and remote NSW to determine if RDN’s strategies to attract and support rural and remote doctors are likely to be as effective for female doctors as for male doctors (McEwin, 2001). The findings of RDN’s research suggest that additional strategies are needed to attract and retain females to rural practice.

The findings from the surveys confirm that RDN’s current strategies are likely to be effective for the majority of male medical practitioners, and further, that the changes that the male general practitioners would make to improve recruitment and retention rates to rural and remote practice are closely aligned with strategies already in place in NSW. The females surveyed raised very different issues from those raised by the males. Males tended not to mention family responsibilities whereas the females were very concerned about difficulties related to balancing professional and family responsibilities.

The findings suggest that RDN should introduce additional “family friendly” rural medical workforce initiatives. A number of recommendations are made in response to the findings from the surveys. The recommendations are designed also to make rural practice attractive to men as well, as men too are making adjustments in these areas. (Research elsewhere suggests that there are increasing numbers of younger males who are also wanting to adopt more “family friendly” modes of practice.)

3.3.6 Flying Doctors

The Royal Flying Doctor Service (RFDS) provides a range of primary medical services to the people of Far Western NSW as well as responding to emergency calls. In 2001 the service provided 650 routine medical clinics and saw over 9000 patients. The service has also been implementing a fly in fly out female GP service to isolated rural communities providing 18 clinics to over 200 patients.

Primary health care services provided by RFDS include:

- Primary medical care/General Practice
- Child and family health
- Indigenous health
- Mental health
- Women’s health
- Health promotion
3.4 Rural Medical Education and Training in NSW

The provision of rural medical education and training in NSW is undertaken by a number of organizations and institutions. These include the medical faculties of the Universities of New South Wales, Newcastle and Sydney (the Australian National University opens its medical faculty in 2004); the University Departments of Rural Health; the University Rural Clinical Schools; General Practice Education and Training (GPET); General Practice Education Australia (GPEA); the six rural GP Regional Training Providers; the Australian College of Rural and Remote Medicine (ACRRM); the other specialist colleges; the rural Divisions of General Practice; the Rural Health Training Units; the NSW Post Graduate Medical Council; the rural Area Health Services and the NSW Rural Doctors Network. The NSW health system, with its three levels of government and a public and private system, adds further complexity to medical education and training in NSW.

Additionally, both State and Federal governments have introduced initiatives to maintain a skilled and responsive rural and remote health workforce. These include initiatives aimed at providing medical undergraduates, postgraduates and vocational trainees with rural exposure. These initiatives have assumed the good will of the rural clinical teachers, with extremely limited resource provisions to these rural teachers. The establishment of Rural Clinical Schools (10 nationally, 3 in NSW) and University Departments of Rural Health (9 nationally, 3 in NSW) will result in at least 25% of medical students undertaking up to 50% of their training in rural areas (RRMA 3 – 7) by 2004. These initiatives are aimed at encouraging students to take up rural practice after graduation and also to increase the number of academics working in rural areas.

Ongoing and conscientious efforts are required to not only integrate and coordinate rural medical education and training initiatives statewide, but also to ensure that they are regionally coordinated and that the essential teaching workforce and infrastructure (eg student accommodation) is sustainable. Education and training programs need to be appropriate to, and cognizant of, local activities and knowledge. Formal and acknowledged processes need to be in place to ensure the success of the rural medical workforce initiatives at all levels. If sufficient attention is not given to supporting and resourcing local or regional activities, as has occurred in the past, there is increasing danger that the initiatives will not have their intended effect. The strain on the rural workforce is, and will be, such that problems are created rather than alleviated. In NSW, providing cohesion and regional coordination to all rural medical education and training is the aim of the Rural Medical Training Forum (RMTF).

The RMTF represents the rural organisations and most of the providers of rural medical education and training and is therefore independent of any one organisation. It is thus in a unique position in NSW through its extensive networks to promote regional coordination as well as ensuring vertical integration from rural high school activities through undergraduate to post graduate and vocational training. The RMTF is facilitated by the NSW Rural Doctors Network. The RMTF has been instrumental in promoting regional coordination and hosting forums on relevant issues.

Table 10: University Rural Clinical Schools and Departments of Rural Health

<table>
<thead>
<tr>
<th>University</th>
<th>Rural Clinical School</th>
<th>University Department of Rural Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Sydney</td>
<td>Dubbo Rural Clinical School</td>
<td>Broken Hill</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Northern Rivers</td>
</tr>
<tr>
<td>University of NSW</td>
<td>School of Rural Health</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Greater Murray (including</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wagga Wagga, Albury and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Griffith), Coffs Harbour, Port</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Macquarie and Kempsey</td>
<td></td>
</tr>
<tr>
<td>University of Newcastle</td>
<td></td>
<td>Tamworth</td>
</tr>
<tr>
<td>Australian National University</td>
<td>Goulburn and Bega</td>
<td></td>
</tr>
<tr>
<td>(from 2004)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.4.1 General Practice Training in NSW

In NSW the following rural regional consortia have been established:

- Central West Consortia (Central Western NSW)
- CoastCityCountry (Illawarra, Shoalhaven, ACT, Southern NSW, Riverina, Murrumbidgee areas)
- General Practice Training – Valley to Coast (Central Coast and Hunter Valley)
- New England Area Training Services
- North Coast NSW GP Training (Northern Rivers and Mid North Coast)
- Rhedwest Ltd (Western and Far Western NSW)

3.5 Rural Area Health Services

Structurally, NSW health services are administered by Area Health Services (AHSs). There are 8 rural AHSs (Table 11), and 4 metropolitan AHS which include some rural areas (RRMA 3 – 7). The latter include Hunter, Illawarra, South Western Sydney and South Eastern Sydney (Lord Howe Island).

AHSs have a major role in the planning, delivery and coordination of local health services, resource management and the maintenance of a balance between treatment and prevention services within their geographic areas. They are responsible for providing services such as public health, community health, public hospitals, multi-purpose services, psychiatric hospitals, nursing homes, community support services and other outreach programs (NSW Health, Annual Report, 2000/01, p.3). Although rural people do need to travel to metropolitan areas for a number of more complex services, the NSW Department of Health has estimated that the rural Area Health Services meet 82% of the demand for public hospital care within rural NSW (NSW Health, 2002a, p.14).

Table 11: Profile of Rural Area Health Services in NSW (RRMA 3-7)

<table>
<thead>
<tr>
<th>Area Health Service</th>
<th>Area (km²)</th>
<th>No of LGAs</th>
<th>Population (estimated resident population, ABS)</th>
<th>Hospitals (number)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2002</td>
<td>Projected change in 2012</td>
</tr>
<tr>
<td>Far West</td>
<td>270000</td>
<td>8*</td>
<td>47 949</td>
<td>- 7.4%</td>
</tr>
<tr>
<td>Greater Murray</td>
<td>113854</td>
<td>28</td>
<td>258 731</td>
<td>- 0.1%</td>
</tr>
<tr>
<td>Macquarie</td>
<td>116720</td>
<td>11</td>
<td>103 807</td>
<td>- 0.3%</td>
</tr>
<tr>
<td>Mid North Coast</td>
<td>21160</td>
<td>8</td>
<td>267 493</td>
<td>+ 9.7%</td>
</tr>
<tr>
<td>Mid Western</td>
<td>59835</td>
<td>13</td>
<td>168 030</td>
<td>+ 0.7%</td>
</tr>
<tr>
<td>New England</td>
<td>98000</td>
<td>20</td>
<td>173 313</td>
<td>- 5.9%</td>
</tr>
<tr>
<td>Northern Rivers</td>
<td>24555</td>
<td>10</td>
<td>270 162</td>
<td>+ 12.4%</td>
</tr>
<tr>
<td>Southern</td>
<td>52214</td>
<td>16</td>
<td>187 226</td>
<td>+ 6.8%</td>
</tr>
</tbody>
</table>

* including the Unincorporated West

3.6 Rural Divisions of General Practice

The Commonwealth Government established the Divisions of General Practice nationally in 1992/93 as a result of reforms and budget initiatives. The reforms aimed to provide an organizational structure for general practitioners to work together to improve the quality of healthcare, promote preventive healthcare and respond to local community health needs (DHAC, 2000). There are seventeen rural and twenty urban Divisions of General Practice in New South Wales and three rural border (Victorian border) Divisions. The seventeen rural Divisions and the three border Divisions cover all geographic areas of the state outside the Wollongong, Blue Mountains and Greater Newcastle triangle (See Map 2).
Chapter 4: NSW Rural General Practitioner Workforce

4.1 Rural General Practitioners

At 30 November 2002 there were 1,347 GPs residing and practising in RRMA 3 to 7 areas in NSW (RDN Database, November 2002). (Table 12). The majority work in RRMA 3 to 5 areas. Very few work in RRMA 7, and there are no RRMA 6 locations in NSW. Females are under represented in the workforce, comprising only 28.6% of the total workforce. The workforce is reasonably stable with an average of 16 years spent in rural practice. Seventy-three percent of the workforce self report as being vocationally registered and 59% have hospital visiting medical officer (VMO) status.

Table 12: Characteristics of the NSW rural general practice workforce

<table>
<thead>
<tr>
<th>RRMA</th>
<th>No. of GPs</th>
<th>No. and % of female GPs</th>
<th>Average age (years)</th>
<th>Average Clinical Hours (per week)</th>
<th>Average years spent in rural practice</th>
<th>Number of NSW towns with resident GPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>285</td>
<td>102 (35.79%)</td>
<td>48</td>
<td>37.07</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>429</td>
<td>130 (30.30%)</td>
<td>47</td>
<td>43.96</td>
<td>15</td>
<td>52</td>
</tr>
<tr>
<td>5</td>
<td>602</td>
<td>146 (24.25%)</td>
<td>49</td>
<td>52.57</td>
<td>16</td>
<td>139</td>
</tr>
<tr>
<td>7</td>
<td>31</td>
<td>7 (22.58%)</td>
<td>43</td>
<td>54.02</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Total (3-7)</td>
<td>1,347</td>
<td>385 (28.58%)</td>
<td>48</td>
<td>46.60</td>
<td>16</td>
<td>225</td>
</tr>
</tbody>
</table>

Source: RDN Database, November 2002

4.1.1 Age

The average age of the existing workforce is 48.0 years (Table 12) and 23% are over 55 years compared with 11% under 35. Overseas-trained doctors and postgraduate entry medical students are likely to be older on entry to the workforce.

4.1.2 Gender

28.6% percent of the current workforce is female who tend to be younger than the males (Figure 1). Forty-four percent of the GPs under 35 years are female compared with 13% of GPs over 55 years. This reflects the increasing proportion of females entering medical schools. Females tend to work fewer hours in direct patient care than their male colleagues.

Figure 1: Gender by Age Group of GPs in RRMA 3 – 7 in NSW

![Gender by Age Group in Rural and Remote NSW](source: RDN Database 30th November 2002)

2 Unless otherwise specified the information in this chapter about the rural and remote GP workforce is obtained from the RDN Database as at 30th November 2002
4.1.3 Clinical Workload and Hours Worked

Estimates of Full Time Equivalents (FTEs) and Full Time Workload Equivalents (FWEs) as used by the Health Insurance Commission (HIC) in calculating GP medical service provision are based solely on the number and the dollar value of claims made by a provider over a given reference period (usually 12 months). While a useful measure of overall service provision under Medicare, it does not reflect the number of hours worked in providing medical services or services provided that are not claimed and/or are not claimable through the HIC. Specific services not included are after hours work seeing patients in the hospital setting and procedural services (eg anaesthetics, obstetrics and surgery) provided to public inpatients by general practitioners. This can represent up to 50% of procedural GPs’ workload. Using HIC figures alone is therefore a major source of inaccuracy in estimating workload.

An alternative measure of service provision is the number of clinical hours worked. For the purposes of this report, clinical hours worked are those hours spent in “direct patient care” as defined:

- the hours spent seeing patients in their rooms and in hospitals, on call hours actually worked (but not on call hours not worked), travel time to other patient care settings eg satellite surgeries, hours worked in public health and population health endeavors; but not teaching time per se or hours spent in Divisional activities.

Figure 2 shows GP self reported clinical hours worked according to the definition above. It should be noted that the hours are not total hours because work related activities such as teaching, administration, supervising other doctors and so on are not included.

The Australian Bureau of Statistics (ABS) defines full-time work as being 35 hours per week or more and part-time work as less than 35 hours. AMWAC (AMWAC 2000.2, p63) uses another measure of full-time in calculating GP:population ratios based on an average of 54 hours per week for 46 weeks per year.

An estimate of full-time/part-time medical service provision utilising the ABS benchmark showed that in rural and remote NSW, of all females, 45.3% work full-time. Of all males, 83.8% work full-time. The proportion of males working full time is high (>80%) except in categories under 35 years. The proportion of females working full time ranges from 31% of those aged 40 to 44 years, to 81% of those aged 55 to 59 years.

In November 2002 male GPs in rural and remote NSW were working an average of 52.7 hours per week in direct patient care (as defined above) and females were working an average of 31.2 hours per week in direct patient care (RDN Database November 2002).
4.1.4 Country of Origin

Of those rural GPs on the RDN database, 867 have provided their country of birth. The majority was born in Australia (61%) or the United Kingdom and Ireland (11.4%). Other countries where greater than 1% were born were India, South Africa, New Zealand, Egypt, Malaysia, Germany, Hong Kong and Vietnam. The rest were born in fifty two other different countries. Many doctors born and educated as medical practitioners overseas have been working in rural practice in NSW for many years. In 1999 legislative changes to NSW medical registration facilitated the entry of overseas-trained doctors into practices in areas of workforce shortage (see Chapters 3.3.3 and 4.1.10).

4.1.5 Why are GPs in rural practice?

GPs were asked the reasons for choosing rural practice (McEwin, 2001). Attraction to the rural lifestyle and to rural practice are the most significant reasons. Thirty eight percent of the female survey respondents stated that they are in rural practice because they have followed their husbands to rural areas, usually for their husbands’ work. (This compares with 2% of the male GPs who have followed their spouses into rural areas (McEwin, 2001).

Other factors that GPs have provided to RDN for choosing rural practice are: belonging to a community, valued by patients/community, hospital work, location, spouse/family reasons, to do obstetrics, variety of pathology, “cradle to grave” medicine and autonomy (RDN Workforce Survey, 2002).

Table 13: Reasons for Choosing Rural Practice

<table>
<thead>
<tr>
<th>Reason (responses are grouped* and are not mutually exclusive**)</th>
<th>Female GPs</th>
<th>Male GPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attraction to lifestyle</td>
<td>47%</td>
<td>47%</td>
</tr>
<tr>
<td>Attraction to rural practice (more challenging/interesting)</td>
<td>38%</td>
<td>53%</td>
</tr>
<tr>
<td>Marriage/spouse’s choice</td>
<td>38%</td>
<td>2%</td>
</tr>
<tr>
<td>Extended family/better for children/be close to family</td>
<td>14%</td>
<td>2%</td>
</tr>
<tr>
<td>Rural exposure</td>
<td>8%</td>
<td>21%***</td>
</tr>
<tr>
<td>Workforce need</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Career reasons (such as appointment)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Following father</td>
<td>-</td>
<td>2%</td>
</tr>
</tbody>
</table>

* Many respondents gave more than one reason  
** For example “attraction to lifestyle” can assume rural exposure  
*** “Rural exposure” can include rural origin.  
Source: McEwin 2001

4.1.6 Early Rural Exposure

There is evidence both from within Australia and internationally that doctors with rural backgrounds are more likely to return to rural areas to practice (Dunbabin and Levitt, 2003; McDonald et al, 2003). Forty three percent of male GPs and 34% of female GPs residing and practising in rural and remote areas of NSW in 2000 were raised in rural areas (McEwin, 2001). These percentages are higher than would be expected in urban practices. As more rural origin students get into medical schools this is expected to become more significant.

4.1.7 Medical Practitioners with Children

The percentages of female and male general practitioners with children are similar (McEwin, 2001) – 87% and 93% respectively and very similar to the percentages of female and male general practitioners in married or de facto relationships.

There are clear differences in the way females and males assign responsibility for raising children (McEwin, 2001). Seventy eight percent of female GPs have the main responsibility for the care of the children. Only 10% reported sharing the responsibility with their spouses. Six percent of female GPs with children do not have the main or shared responsibility for caring for children and 6% reported that their children were now adults. Over two thirds of the children of female GPs are either at school or yet to go to school. This compares with approximately half of the male GPs’ children. The children of male GPs are likely to be older, and more likely, therefore, to require less looking after. This is inconsequential, however, if the males are unlikely to have primary responsibility for raising children as is shown by AMWAC research (AMWAC, 1998).
4.1.8 Satisfaction with hours worked
McEwin showed that 56% of the female GPs are satisfied with their working hours. This is higher than the percentage for male GPs (only 36% are satisfied) and probably reflects the fact that fewer females are working full time. Forty one percent of females would prefer to work fewer hours per week but don’t because of staff shortages/patient demand (37%); career commitments and expectations of the community and colleagues (31%); and for financial reasons (27%). Four percent of the female GPs would prefer to work more hours per week. Sixty two percent of the male GPs would prefer to work fewer hours but don’t because of the rural GP shortage and/or their professional responsibilities to their patients (64%) or for financial reasons (36%). (McEwin, 2001)

4.1.9 Procedural General Practitioners
Rural GPs carry out advanced procedural skills where there are no specialists to do so. The range of procedures they do is generally inversely related to their proximity to larger centres where specialist services are provided. The ability to do procedural work is often cited as one of the reasons GPs stay in rural practice (Dunbabin, 2002).

As shown in Table 14, the general practice workforce is spread relatively evenly between RRMA 4 and 5, with fewer in RRMA 3 and a small number in RRMA 7. In contrast, 72% of procedural GPs are in RRMA 5, 24% in RRMA 4 and 4% in RRMA 7, with little variation between advanced procedural skills. Dunbabin (2002) showed that at 30th June 2001, obstetrics (166 GPs) was the most commonly practised advanced procedural skill, followed by anaesthetics (118 GPs) and surgery (70 GPs, though some do a narrow range of procedures). Sixty-seven GPs did lower section caesarean sections. Procedural GPs in RRMA 3 were not surveyed. However, there are a relatively small number due to proximity to Base Hospitals and specialist services.

The average age of procedural GPs at 30 June 2001 was 45.8 years and the median was 46 years. Male GPs comprised 87% of the GP procedural workforce compared with 74% of the general practice workforce (Table14).

There were only small differences in gender mix between the advanced procedural skills. More female GPs practised obstetrics than anaesthetics or surgery (16% compared with 7-9%). There was no statistically significant (p<0.05) variation in either gender mix or mean age of the respondents based on RRMA classification. However, females were significantly younger than males (p<0.001) and GP surgeons were significantly older (p<0.01) than either obstetricians or anaesthetists (Table 14). The majority of GPs were aged between 45 and 54, followed by 35 to 44 year olds, with the exception of surgeons, where 30% were over 55. Almost a third of all female procedural GPs are under 35, compared with only 5.6% of males.

The majority of GPs have been practising their advanced procedural skills for between 11 and 20 years, with the exception of GP surgeons, where the average length of practise is 20 years and the largest cohort have been practising for over 20 years (Table 15). In contrast, only 2% of the GP surgical workforce has been practising for less than 5 years. This figure is somewhat higher for obstetricians, those doing LSCS and anaesthetists (9-10%).

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Range</th>
<th>Mean +/- sd</th>
<th>Median</th>
<th>&lt; 35</th>
<th>35 – 44</th>
<th>45 – 54</th>
<th>&gt; 55</th>
</tr>
</thead>
<tbody>
<tr>
<td>All respondents</td>
<td>203</td>
<td>30 – 74</td>
<td>45.8 +/- 7.7</td>
<td>46</td>
<td>8.9</td>
<td>35.5</td>
<td>40.9</td>
</tr>
<tr>
<td>Females</td>
<td>25</td>
<td>30 – 54</td>
<td>40.1 +/- 6.5</td>
<td>39</td>
<td>32.0</td>
<td>32.0</td>
<td>36.0</td>
</tr>
<tr>
<td>Males</td>
<td>178</td>
<td>33 – 74</td>
<td>46.6 +/- 7.5</td>
<td>47</td>
<td>5.6</td>
<td>36.0</td>
<td>41.6</td>
</tr>
<tr>
<td>Obstetricians</td>
<td>152</td>
<td>30 – 74</td>
<td>45.6 +/- 7.6</td>
<td>46</td>
<td>8.6</td>
<td>36.8</td>
<td>42.1</td>
</tr>
<tr>
<td>LSCS</td>
<td>55</td>
<td>32 – 74</td>
<td>46.7 +/- 9.1</td>
<td>46</td>
<td>9.1</td>
<td>36.4</td>
<td>34.5</td>
</tr>
<tr>
<td>Anaesthetists</td>
<td>103</td>
<td>32 – 61</td>
<td>45.4 +/- 7.0</td>
<td>46</td>
<td>7.8</td>
<td>37.9</td>
<td>42.7</td>
</tr>
<tr>
<td>Surgeons</td>
<td>54</td>
<td>32 – 74</td>
<td>50.2 +/- 8.5</td>
<td>50</td>
<td>5.6</td>
<td>16.7</td>
<td>48.2</td>
</tr>
</tbody>
</table>

Source: Dunbabin, 2002, Procedural Medicine in Rural and Remote NSW
Table 15: Years as a fully qualified GP practising advanced procedural skills at 30 June, 2001*

<table>
<thead>
<tr>
<th></th>
<th>Obstetricians</th>
<th>LSCS</th>
<th>Anaesthetists</th>
<th>Surgeons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range (years)</td>
<td>1-48</td>
<td>2-48</td>
<td>3-35</td>
<td>3-48</td>
</tr>
<tr>
<td>Mean +/- sd (years)**</td>
<td>15.5 +/- 8.2</td>
<td>16.1 +/- 9.9</td>
<td>14.2 +/- 7.9</td>
<td>20.3 +/- 9.2</td>
</tr>
<tr>
<td>&lt;5 (%)</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>5 – 10 (%)</td>
<td>25</td>
<td>29</td>
<td>30</td>
<td>17</td>
</tr>
<tr>
<td>11 – 20 (%)</td>
<td>45</td>
<td>35</td>
<td>41</td>
<td>38</td>
</tr>
<tr>
<td>21+ (%)</td>
<td>22</td>
<td>27</td>
<td>20</td>
<td>44</td>
</tr>
</tbody>
</table>

* unadjusted for changes in training regime over time
** Missing values for obstetrics = 6, LSCS = 1, anaesthetics = 4 and surgery = 7
Source: Dunbabin, 2002, Procedural Medicine Survey

Over the previous 7 years, the GP workforce in most procedural towns has either decreased, or stayed the same (Table 16). More GPs (37%), however, felt that their workload had decreased than felt it had increased (25%).

Table 16: Changes in the size and activity of the GP procedural workforce over the last 7 years (n = 222) and workload preferences at 30 June, 2001

<table>
<thead>
<tr>
<th>(%)</th>
<th>Number of procedural GPs in your town now compared with 7 years ago</th>
<th>Average procedural workload now compared with 7 years ago*</th>
<th>Workload preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Obstetrics</td>
</tr>
<tr>
<td>Same</td>
<td>30</td>
<td>24</td>
<td>56</td>
</tr>
<tr>
<td>More</td>
<td>4</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Less</td>
<td>65</td>
<td>37</td>
<td>13</td>
</tr>
<tr>
<td>Unsure</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

* 11% were not practising procedural medicine 7 years ago
Source: Dunbabin, 2002, Procedural Medicine Survey

When asked to comment on how satisfied they were with their current workloads, approximately half the procedural GPs stated they would prefer to do about the same number of procedures as they are doing now. Of those not doing their preferred workload, anaesthetists and surgeons indicated they would prefer to do more procedures, compared with obstetricians, 13% of whom would like to do less (Table 16). The reasons given for workload preferences not matching reality are similar to those given for changes in individual workloads.

The majority (87%) of procedural GPs felt that procedural medicine was an important part of why they continue to stay in rural practice. Wide-ranging views were expressed in response to the possibility of procedural medicine being withdrawn from their practice. There was a distinction between those enjoying procedural medicine who would move to a new location to do it (15%), and those finding a change attractive – either moving to a more favoured location (usually urban/coastal) or leaving medicine altogether (18%). The remainder of the workforce were either undecided or would stay in the same location.

Procedural GPs were also asked directly about their plans to stop practising advanced procedural skills in the foreseeable future (Table 17).
Table 17: Future intentions of GPs practising advanced procedural skills

<table>
<thead>
<tr>
<th>Advanced procedural skill</th>
<th>GPs stopping between July 2000 and June 2001 (% of all respondents)</th>
<th>Intention to stop practising advanced procedural skills (% of procedural GPs practising at 30 June, 2001)</th>
<th>Unsure (%)</th>
<th>Total (numbers responding to this question)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;1 yr</td>
<td>1 – 3 yrs</td>
<td>3 – 5 yrs</td>
<td></td>
</tr>
<tr>
<td>Obstetrics</td>
<td>11</td>
<td>9</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>LSCS</td>
<td>16</td>
<td>7</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Anaesthetics</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Surgery</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: Dunbabin, 2002, Procedural medicine in rural and remote NSW

Those indicating they were likely to cease practising within the next 5 years represented 33% of obstetricians, 25% of those doing LSCS, 20% of anaesthetists and 20% of surgeons practising at 30 June, 2001. This proportion may increase due to the relatively high number of GPs who were unsure of their intentions. Despite being older, surgeons indicated they were more likely to continue to practice beyond 5 years. Obstetricians were the least certain, with only 50% indicating a clear intention to continue beyond 5 years.

Assuming that the same rate of procedural medicine is to be provided by GPs (ie that NSW Health will provide adequate facilities and staff and credential GPs to carry out procedures), there is a serious under supply of procedural GPs for the near future. A number of issues need to be addressed, including litigation and indemnity insurance, and attracting and training a large enough cohort to maintain the workforce. This is critical if procedural medicine is to continue in the smaller rural towns. In response to submissions from the Rural Doctors Association, NSW, and RDN, the NSW Health Minister recently announced funding for 30 procedural training posts per annum over three years with the first of these positions commencing in early 2003.

4.1.10 Overseas Trained Doctors

In May 1999 the requirements for conditional ‘area of need’ medical registration in NSW were significantly amended. Since then, RDN has received over two thousand inquiries from permanent resident overseas-trained doctors’ seeking positions in general practice in NSW. The first doctor assessed according to the new criteria was interviewed by the NSW Medical Board in July 1999 and commenced in general practice in Temora in August 1999.

Prior to the introduction of the Targeted Inland Recruitment Scheme (TIRS) in August 2000, RDN did not accept applications from doctors who were not permanent residents of Australia, or Australian citizens, for other than locum positions. Since the introduction of the TIRS, however, an average of 15 applications per week has been received from overseas-trained doctors seeking to migrate to Australia.

Between July 1999 and November 2002, RDN has, to varying degrees, facilitated the appointment of 168 overseas-trained doctors into general practice positions in rural NSW. These figures do not include OTDs employed by RDN as locums.

Table 18: Overseas Trained Doctors commencing in general practice positions between August 1999 and 30 November 2002

<table>
<thead>
<tr>
<th>Status at appointment</th>
<th>Permanent Residents/ Australian Citizens (PROTDs)</th>
<th>Temporary Residents/ New Zealand Citizens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Medical Registration</td>
<td>49</td>
<td>7</td>
<td>56</td>
</tr>
<tr>
<td>Specialist General Practice Registration</td>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Area of Need Registration</td>
<td>62</td>
<td>41</td>
<td>103</td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td>57</td>
<td>168</td>
</tr>
</tbody>
</table>

Source: RDN Database, November 2002

The number of inquiries far exceeds the number of doctors who have the qualifications and experience to be able to work in rural areas. RDN has developed a comprehensive program to assist those doctors who are close to being able to work in rural NSW, to gain the necessary skills and experience to do so.
Table 19 details the registration and residency status of the overseas trained doctors working in general practice in rural NSW at 30 November 2002. For the purpose of this plan RDN has defined “overseas trained doctors” as GPs with current registration and/or provider number restrictions or limitations. We acknowledge that there are many doctors with primary medical qualifications from outside Australia who have been practising in rural NSW for many years.

<table>
<thead>
<tr>
<th>Status at 30 November 2002</th>
<th>Permanent Citizens (PROTDs)</th>
<th>Temporary Citizens (New Zealand Citizens)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Medical Registration</td>
<td>43</td>
<td>4</td>
<td>47</td>
</tr>
<tr>
<td>Specialist General Practice Registration</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Area of Need Registration</td>
<td>42</td>
<td>18</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>27</td>
<td>116</td>
</tr>
</tbody>
</table>

Source: RDN Database, November 2002

Thirteen of the OTDs appointed with conditional ‘area of need’ medical registration have now satisfied the requirements for and been granted specialist or full medical registration. In December 2001, the OTD Program was split into a Temporary Resident Overseas Trained Doctor (TROTD) Program and a Permanent Resident Overseas Trained Doctor (PROTD) Program. As at the 30th November 2002, RDN interviewed 150 PROTDs wishing to work in rural general practice positions in NSW (see Table 20).

Table 20: Of the 150 Permanent Resident Overseas Trained Doctors interviewed between 2001 and 30 November 2002:

- 25 were supported by RDN to go before the NSW Medical Board Assessment Panel for conditional Area of Need medical registration.
- 23 successfully gained Area of Need Registration.
- 17 commenced working in an Area of Need GP position.
- 3 were matched with a position and waiting to go before the Medical Board Assessment Panel.
- 35 were assessed by RDN as appropriate for rural general practice and were looking for a suitable position.

Table 21: The Source of locums accessed in 2002

<table>
<thead>
<tr>
<th>Locum Source</th>
<th>Frequency (number of GPs using this mode)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division of GPs</td>
<td>71</td>
</tr>
<tr>
<td>Local retired GP</td>
<td>1</td>
</tr>
<tr>
<td>Locum service</td>
<td>77</td>
</tr>
<tr>
<td>NSW RDN</td>
<td>28</td>
</tr>
<tr>
<td>Other</td>
<td>91</td>
</tr>
<tr>
<td>Own practice</td>
<td>515</td>
</tr>
<tr>
<td>Regional GP</td>
<td>40</td>
</tr>
<tr>
<td>RWA Victoria</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: RDN Database, November 2002

RDN operates a locum service from its Dubbo office. The philosophy of the service is “worst first” – RDN endeavours to place locums in the practices where the need is perceived to be the greatest, giving priority to towns in the RRMA 4 – 7 and one and two doctor practices. During the 12 month period from 1 December 2001 to 30 November 2002, a total of 96 weeks of locum support were provided by five male, RDN employed locums. Thirty seven weeks of locum service were provided in RRMA 5 towns (10 towns in all) and 59 weeks in RRMA 7 towns (2 towns).

4.1.11 Locum Services in Rural NSW

Access to adequate locum relief is pivotal to the retention of the rural general practice workforce and the sustainability of quality GP services. There is little data collected in a meaningful way about doctors working as locums or the adequacy of the locum workforce to meet the needs of the permanent GP workforce for both routine leave and for emergency relief. Rural Workforce Agencies are discussing methods of achieving better data about locum services.

Source: RDN Database, November 2002

4.2 Number of GPs recruited to, and leaving, rural practice

Despite being under supplied in many areas, the medical workforce in rural NSW is relatively stable. Tables 22 and 23 below show details of the GPs who entered and left rural and remote NSW during the calendar year 2002.

During 2002, 43 female GPs and 83 male GPs (a total of 126 GPs) entered new rural or remote locations in NSW. This included 23 who moved from one rural location within NSW to another. So the total number of GPs entering rural or remote practice from outside rural and remote NSW was 103 (126 less 23). During the same period 29 female GPs and 62 male GPs (a total of 91 GPs) left rural or remote locations in NSW. This included 19 who left one rural practice location within NSW to go to another. So the total number of GPs leaving rural or remote NSW was 74 (91 less 17). The net gain of GPs to rural and remote NSW during 2002 was thus 29 (103 less 74).

Table 22: GPs who entered practice in rural and remote NSW during 2002

<table>
<thead>
<tr>
<th>Count of GPs who entered rural and remote practice</th>
<th>Female GPs</th>
<th>Male GPs</th>
<th>Total Female GPs</th>
<th>Male GPs</th>
<th>Total Males and Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origin of GP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMC graduate</td>
<td>3 4 5 7</td>
<td>3 4 5 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interstate GP</td>
<td>2 2 3 1</td>
<td>2 2 3 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locum doctor</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROTD</td>
<td>3 1 4 3</td>
<td>3 1 4 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP Registrar who has completed training</td>
<td>2 2 2 6</td>
<td>2 2 2 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other rural NSW</td>
<td>2 5 7 4</td>
<td>2 5 7 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TROTD</td>
<td>1 2 1 4</td>
<td>1 2 1 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>unknown/other</td>
<td>4 1 5 1</td>
<td>4 1 5 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban NSW</td>
<td>1 4 4 9</td>
<td>1 4 4 9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td>12 12 8 18</td>
<td>12 12 8 18</td>
<td>43 18 22 38</td>
<td>5 18</td>
<td>83 126</td>
</tr>
</tbody>
</table>

Table 23: GPs who left practice in rural and remote NSW during 2002

<table>
<thead>
<tr>
<th>Count of GPs who left rural and remote practice</th>
<th>Female GPs</th>
<th>Male GPs</th>
<th>Total Female GPs</th>
<th>Male GPs</th>
<th>Total Males and Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Became hospital doctor</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left to go interstate</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Went on extended leave</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left rural practice</td>
<td>1 2 3 3</td>
<td>1 2 3 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Became a locum doctor</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternity leave</td>
<td>2 1 3 3</td>
<td>2 1 3 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>3 2 1 6</td>
<td>3 2 1 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural elsewhere in NSW</td>
<td>4 2 6 2</td>
<td>4 2 6 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study leave</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>3 1 4 1</td>
<td>3 1 4 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban NSW</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td>9 11 8 1 29 10 16 34 2</td>
<td>9 11 8 1 29 10 16 34 2</td>
<td>62 91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.3 Potential Additions to the Workforce Supply

4.3.1 General Practice Registrars

GP registrars in their final years of training, contribute significantly to the provision of general practice services to rural and remote NSW. General Practice Training is now split between the program introduced in 2002 and overseen by General Practice Education and Training (GPET) and the earlier program that was overseen by the RACGP and which is now under the auspices of General Practice Education Australia (GPEA). Both GPET and GPEA provide a rural pathway. As 2002 was the first year of operation of GPET Table 24 is effectively information about registrars in the new GPET program. Table 25 provides information on registrars in the old RACGP Training program that is now run by GPEA.

Table 24: GPET trainees in general practice, pathway and gender 2002

<table>
<thead>
<tr>
<th>Program</th>
<th>NSW</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>75</td>
<td>250</td>
</tr>
<tr>
<td>Rural</td>
<td>55</td>
<td>201</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>451</td>
</tr>
</tbody>
</table>

| % rural | 42.3 | 44.6 |
| % of total trainees in Australia | 28.8 | 100 |
| No. of females | 75  | 245 |
| % of overall | 57.7 | 56.3 |

Source: MTRP Sixth Report October 2002 p27

Table 25: GPEA trainees in general practice, pathway and gender 2002

<table>
<thead>
<tr>
<th>Program</th>
<th>NSW</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>179</td>
<td>623</td>
</tr>
<tr>
<td>Rural</td>
<td>113</td>
<td>355</td>
</tr>
<tr>
<td>Total</td>
<td>292</td>
<td>978</td>
</tr>
</tbody>
</table>

| % rural | 38.7 | 36.3 |
| % of total trainees in Australia | 29.9 | 100 |
| No. of females | 188 | 613 |
| % of overall | 64.4 | 62.7 |

Source: MTRP Sixth Report October 2002 p27

4.3.2 Medical Students in NSW

There are currently three medical faculties in NSW. Student enrolments in 2003 are as follows:

Table 26: University of Sydney Medical Students 2003*

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>104</td>
<td>131</td>
<td>235</td>
</tr>
<tr>
<td>2</td>
<td>101</td>
<td>133</td>
<td>234</td>
</tr>
<tr>
<td>3</td>
<td>110</td>
<td>119</td>
<td>229</td>
</tr>
<tr>
<td>4</td>
<td>96</td>
<td>131</td>
<td>227</td>
</tr>
</tbody>
</table>

* includes international students

Table 27: University of NSW Medical students 2003*

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>114</td>
<td>121</td>
<td>235</td>
</tr>
<tr>
<td>2</td>
<td>105</td>
<td>119</td>
<td>224</td>
</tr>
<tr>
<td>3</td>
<td>107</td>
<td>109</td>
<td>216</td>
</tr>
<tr>
<td>4</td>
<td>104</td>
<td>112</td>
<td>216</td>
</tr>
<tr>
<td>5</td>
<td>98</td>
<td>97</td>
<td>195</td>
</tr>
<tr>
<td>6</td>
<td>94</td>
<td>92</td>
<td>186</td>
</tr>
</tbody>
</table>

* includes international students

Table 28: University of Newcastle Medical students 2003*

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>38</td>
<td>66</td>
<td>104</td>
</tr>
<tr>
<td>2</td>
<td>27</td>
<td>56</td>
<td>83</td>
</tr>
<tr>
<td>3</td>
<td>39</td>
<td>53</td>
<td>92</td>
</tr>
</tbody>
</table>

* includes international students
Chapter 5: Assessing the Adequacy of the Current Supply of GPs and Projecting Future GP Requirements – Developing a Platform for Planning

5.1 Introduction

There are many variables that will affect the "ideal" general practitioner to population ratios including:

- The population profile – for example, the age and gender mix; the socioeconomic characteristics of the population; the proportion of Aboriginal and Torres Strait Islander populations; the ethnic mix;
- The health of the population ("the burden of disease");
- The employment and education levels of the population;
- The availability and accessibility (or otherwise) of other health services including other primary care professionals, specialists, allied health and support services eg counselling services, mental health services;
- The cohesion and mutual support of the communities within the population;
- The expectations of the health consumers;
- The totality of income available from all sources for GP services (from eg Medicare, public health, hospital);
- The skills mix of the other GPs including procedural GPs;
- The levels of substitution by other health professionals; and
- Whether or not there is a hospital or Multi Purpose Service.

There is also debate around what is "ideal" in the sense of demand versus perceived need. A population may demand more or fewer GP services than others may perceive that it needs. It could be argued, for example, that consumers in parts of the Eastern Suburbs of Sydney now regard GP services (GP cosmetic surgery services, GP body piercing services and so on) as "beauty" commodities. Conversely the experience of the Rural and Remote Medical Services (RARMS), a company established to provide GP services to the north west of NSW, has demonstrated the effect of providing additional GPs to a traditionally under served area. HIC consultations rose by 40% in the first nine months of RARMS' operation and maintained a sustained rise of over 30% in the next year.

The development of appropriate tools for assessing the adequacy of the current general practice workforce and for assessing future workforce requirements is difficult. At best it can be the starting point for discussion. It will certainly never be an exact science with precise outcomes.

In assessing the adequacy of the current supply of GPs and in projecting future GP requirements, judgements are made. These are not irrefutable or set in concrete. The assumptions and judgements made in the predictive modelling in this plan are described so that they can be reconsidered with each revision of GP workforce planning in the future. Medical workforce planning at rural and remote levels is evolving. The projections in this chapter provide a platform for planning and discussion rather than definitive truths. The projections also assume a health system in 2012 that looks much the same as the system today. The impact of technological, structural and policy changes, for example, are not factored into the model (more about this in Chapter 7).

In starting this rural workforce planning exercise RDN believed that the model developed by van Konkelenberg and used by AMWAC (AMWAC, 2000.2) would be available for RWA use. The model proved unable to cope with disaggregation to the smaller numbers involved in rural and remote planning. (It was developed as a national tool for use on national data sets and not for use on disaggregated data.) RWAs set out instead to develop their own models and RDN has chosen to use a variation on the model developed by the Western Australian Centre for Rural and Remote Medicine (WACRRM), as well as the Medical Workforce Supply Estimates (MWSE) planning tool developed by the Queensland Rural Medical Support Agency (QRMSA).

RDN’s predictive modelling involves the following steps (these are explained in greater detail later in the chapter):

1. The baseline GP under supply at 30th November 2002\(^1\) is estimated using two different methods:
   i. estimating the level of “actual GP vacancies” as advertised through the RDN web site and RDN Vacancy Booklet; and
   ii. using the QRMSA Medical Workforce Supply Estimates (MWSE) planning tool.

   This information is disaggregated down to “cluster” Divisional level (see Section 5.2).

2. The future GP supply is then projected until 2012 using the adaptation of the WACRRM model. The model is based on a number of parameters (assumptions) which are explained. Three scenarios are presented. These projections are provided at the aggregated level for all rural and remote NSW.

3. The future demand for GP services is then estimated for 2007 and 2012 by applying the MWSE planning tool. These projections are provided at the aggregated level.

4. The future GP (Full time workforce equivalent or “FWE”) supply is then compared with the future demand for GP (FWE) services. The difference is the estimated GP FWE under supply for 2012.

---

\(^1\) This date was selected after agreement with other RWAs as the latest common date for comparative purposes. More recent data has not been used as this is yet to be verified across all RWAs. In the plan it is referred to as the “current” data.
5.2 NSW Divisional Clusters

The current estimate of under supply is disaggregated into "cluster" level—a cluster being either a single Division of General Practice or a grouping of Divisions, depending on the number of GPs in each Division. The disaggregated approach is used to give an idea of how the current under supply varies across geographical regions of NSW. The basic building block for the population data is the Local Government Area (LGA). LGAs are allocated to the appropriate Divisions.

The determination of whether a Division stands alone as a "cluster" unit or is combined with other Divisions is made on the basis of the number of GPs in each Division. It is preferred that each regional grouping contain at least 100 GPs otherwise the numbers become too small to be useful for projections. Eleven groupings are used for rural NSW:

1. Barrier, Dubbo Plains and Outback Divisions
2. Barwon, New England and North West Slopes Divisions
3. Hunter Rural Division
4. Mid North Coast Division
5. Murrumbidgee and Riverina Divisions
6. Northern Rivers and Tweed Divisions
7. Central West Division
8. Hastings Macleay Division
9. Shoalhaven and Southern Highlands Divisions
10. South East Division
11. Border, Mallee and Murray Plains Divisions

The three Divisions of General Practice that cross the border with Victoria are included in the eleventh disaggregated divisional grouping but only for those GPs (total of 60 GPs) whose principle practice is in NSW.

GP whose principle practices are in RRMA 2 areas are not included in this workforce plan.

5.3 Estimating the Current Level of GP Under Supply

In order to determine the projected number of GPs required for rural and remote NSW in the future it is first necessary to determine the extent to which that workforce is in "balance" (ie meets the current requirements). There is currently an under supply of rural and remote general practitioners in NSW. The extent of this is quantified in this section in order to establish the baseline from which to project future GP supply.

A descriptive profile of the GP workforce (at 30th November 2002) has been provided in Chapter 4. The data have been obtained primarily from the RDN database but also draws on other sources that have been identified. There are a variety of ways of measuring the workforce size, including headcount, full time work equivalent, hours worked, and sessions worked. While the number of GPs (headcount) by age and gender cohort is counted, the base measure of supply and requirements used is hours worked per week. This is the common denominator for comparing supply and requirements and as a result avoids problems associated with differences in calculation of FWEs. In addition, it takes into account variations in hours worked by different age/gender cohorts.

There are different ways of making an assessment about the adequacy of the current supply. Two approaches are taken in this plan. The first is an indicator approach using "actual" (or "true") vacancies as an indicator of under supply. This vacancy approach is then compared with the Medical Workforce Supply Estimates (MWSE) planning tool that has been developed by QRMSA.

2 If an LGA crosses Divisional boundaries, it is allocated proportionately to the Divisions in question.

3 An indicator approach involves choosing a set of indicator criteria, measuring each indicator (if possible), and evaluating each measure against a specified standard, if available.

Some of the adequacy indicators are directly quantifiable, such as number of vacancies, while others are qualitative and/or anecdotal. The only quantifiable data available to RDN has been the number of vacancies. Other indicators inform the overall context in which planning occurs. These include:

- Practitioner to Population Ratios
  Practitioner to population ratios are primarily used as a descriptive tool for making comparisons across States/Territories. They are a broad measure and do not necessarily take into account variations in practice, population demographics, and other external factors, which would impact on the ratio for a particular region.

- Service Waiting Times and Closed Books
  Waiting times are considered an indicator of under/over supply in the sense that longer waiting times may indicate a workforce shortage. There are some difficulties, however, with using waiting times as a reliable indicator. As with some of the other indicators listed here there are confounding factors which may influence waiting times. In addition, no work has been done to define what an acceptable general practice waiting time would be nationally (let alone specifically for rural and remote areas), and as such an assessment would have to be made. In this plan general practice current waiting time information has not been used to estimate under supply as it is anecdotal and patchy across the rural regions. In some rural towns the GPs have closed their books to new patients. This can also be considered as an indicator of under supply. Again, the information is largely anecdotal. The anecdotal information available (including that obtained from the community consultations) has helped RDN to formulate specific questions on waiting times and closed books, which have been included in more recent RDN practice surveys. Data thus collected may be considered in the future for revisions of the plan.

- Excessive Hours of Work
  Hours of work can be useful as an indicator of adequacy by comparing average hours worked by the rural and remote GP workforce with average hours worked by metropolitan GPs. AMWAC considers "excessive" hours (excluding hospital work) as working more than 60 hours per week. Excessive hours worked may vary by region, depending on a variety of factors such as location of practice, local population demographics, proximity of other practitioners, amount of procedural work etc.

- Price and Co-payment Analysis
  Price and co-payment analysis can be used to provide an indication of the adequacy of workforce supply. Medicare data on the proportion of the GP workforce bulk-billing may provide an indication of adequacy supply if it is assumed that the higher the proportion of GPs bulk billing within a region, the better supplied the region is. For the rural and remote GP workforce price and co-payment details do not actually indicate much that is useful as data on bulk billing indicates that the level of bulk billing reduces with rurality, then increases in the very remote areas. The increase reflects the poorer socioeconomic status of patients and has nothing to do with the supply of GPs. Price and co-payment analysis is not regarded as useful in this plan.

-Views of Practitioners and Divisions of General Practice, Consumers and Other Stakeholders
  The views of the GPs, the Divisions, the consumers and other stakeholder groups are critical in making assessments about the adequacy of supply. Practitioners and consumers, for example, are in a unique position to assess the adequacy of the GP workforce, based on patient loads, patient waiting times, working hours, work related stress levels, and other practice-related factors. Input for GPs, Divisions, consumers and other stakeholder groups (eg RDA, NSW) has been provided through the GP community consultations (see Chapter 6), through the Divisions of General Practice and through RDN’s workforce surveys.
Table 29: Divisions of General Practice allocated to Cluster Groupings

<table>
<thead>
<tr>
<th>Grouping number</th>
<th>Divisions and LGAs (in the brackets)</th>
<th>Number of GPs in each Division at 30th November 2002</th>
<th>Number of GPs in each cluster at 30th November 2002</th>
<th>RRMA Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Barrier Division of General Practice (Broken Hill)</td>
<td>18</td>
<td>RRMA 3,4,5,7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dubbo Plains Division of General Practice (Bogan, Coolah, Coonabarabran, Coonamble, Dubbo, Gilgandra, Mudgee, Narromine, Warren, Wellington)</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NSW Outback Division of General Practice (Bourke, Brewarrina, Cobar, Walgett)</td>
<td>16</td>
<td>121</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Barwon Division of General Practice (Barraba, Bingara, Gunnedah, Manilla, Moree Plains, Narrabri, Yallaroi)</td>
<td>37</td>
<td>RRMA 3,4,5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New England Division of General Practice (Armidale Dumaresq, Glen Innes, Guyra, Inverell, Severn, Tenterfield, Uralla)</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>North West Slopes Division of General Practice (Parry, Quirindi, Tamworth, Walcha)</td>
<td>45</td>
<td>137</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Hunter Rural Division of General Practice (Dungog, Gloucester, Great Lakes, Greater Taree, Merriwa, Muswellbrook, Scone, Singleton)</td>
<td>107</td>
<td>RRMA 4,5 (RMMA 2 excluded)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Mid North Coast Division of General Practice (Bellingen, Coffs Harbour, Grafton, Nambucca, Pristine Waters)</td>
<td>116</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Murrumbidgee Division of General Practice (Berrigan, Carrathool, Griffith, Hay, Jerilderie, Leeton, Murrumbidgee Narrandera)</td>
<td>43</td>
<td>RRMA 3,4,5,7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Riverina Division of General Practice (Bland, Coolamon, Cootamundra, Culcairn, Gundagai, Junee, Lockhart, Temora, Tumbarumba, Tumut, Wagga Wagga, Young)</td>
<td>83</td>
<td>126</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Northern Rivers Division of General Practice (Ballina, Byron, Kyogle, Lismore, Maclean, Richmond Valley)</td>
<td>162</td>
<td>RRMA 3,4,5 (RMMA 2 excluded)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tweed Valley Division of General Practice (Tweed Shire Council)</td>
<td>27</td>
<td>189</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>NSW Central West Division of General Practice (Bathurst, Blayney, Cabonne, Cowra, Forbes, Greater Lithgow, Lachlan, Oberon, Orange, Parkes, Rylestone, Weddin)</td>
<td>147</td>
<td>RRMA 3,4,5,7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Hastings Division of General Practice (Hastings and Kempsey)</td>
<td>97</td>
<td>RRMA 3,5,7 (Lord Howe Island)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Shoalhaven Division of General Practice (Shoalhaven)</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Southern Highlands Division of General Practice (Wingecarribee)</td>
<td>40</td>
<td>121</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>South East NSW Division of General Practice (Bega Valley, Bombala, Boorowa, Cooma-Monaro, Crookwell, Eurobodalla, Goulburn, Harden, Snowy River, Tallaganda, Yarrowiluma, Yass)</td>
<td>126</td>
<td>RRMA 4,5 (2 excluded)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Border Division (Albury, Corowa, Holbrook, Urana)</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mallee Division (Balranald, Wentworth)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Murray Plains Division (Deniliquin, Wakool)</td>
<td>11</td>
<td>60 (with principal practice address in NSW)</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>1,347</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GP Vacancies

RDN publishes a vacancy booklet three times/year and has done so since July 1989. In addition to the published vacancy booklet, RDN has maintained a list of advertised vacancies on its web site since 2000. General practitioners, communities, Aboriginal Medical Services and other rural health providers are able to advertise, free of charge, general practitioner positions in the booklet and/or on the web site. (The web site vacancies are updated weekly.) The number of advertised vacancies in the booklets has risen since 1989 (see Figure 3).

A number of factors need to be taken into account when using vacancies as a measure of under supply, including differing definitions of vacancies. Two practices in the one town may, for example, each have a vacancy listed but there will be sufficient workload in that community for only one additional GP. The use of the “vacancy measure” requires careful definition as vacancies are advertised for different reasons.

In the determination of “under supply” RDN is using the definition of “GP actual vacancies” as that defined by the RWA Working Party on Workforce Planning in December 2002, namely “the number of (currently unfilled) positions that a community can sustain taking into account the workload of other GPs in that town or community and for which recruitment action is currently underway or has been undertaken but was unsuccessful.” An analysis of the vacancies identified in the RDN survey using this definition of GP actual vacancies is considered a reliable indicator of immediate shortage as these are equivalent to financially viable or funded positions that would be filled if appropriately skilled individuals were available and willing to fill them.

There are reasons why advertisers advertise while there is not a “true” or “actual” vacancy at the time (for example, to foreshadow a forthcoming retirement or vacancy; or a community or hamlet may advertise when really there is not the workload to financially sustain a FTE GP). Conversely there are reasons why an actual vacancy is not advertised (eg “we have advertised for six months without attracting anyone so what’s the point of continuing to advertise”). It may be also that maintaining under supply is financially advantageous in some instances to the current medical practitioners.

To better understand and clarify the issues surrounding advertised vacancies RDN surveyed NSW rural and remote practices in November 2002. The response rate was 99.5%. The survey asked a number of questions including why the position was being advertised – including leave, retirement, resignation and expansion of practice. Table 30 shows the distribution of the 164 advertised vacancies by RRMA classifications.

Table 30: Advertised GP Vacancies in November 2002 for RRMA 3 – 7

<table>
<thead>
<tr>
<th>RRMA</th>
<th>Number of Advertised Vacancies</th>
<th>% of Vacancies to GP pop*</th>
</tr>
</thead>
<tbody>
<tr>
<td>RRMA 3</td>
<td>27</td>
<td>9%</td>
</tr>
<tr>
<td>RRMA 4</td>
<td>30</td>
<td>7%</td>
</tr>
<tr>
<td>RRMA 5</td>
<td>84</td>
<td>13%</td>
</tr>
<tr>
<td>RRMA 7</td>
<td>13</td>
<td>40%</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>N/A</td>
</tr>
<tr>
<td>Total</td>
<td>164</td>
<td></td>
</tr>
</tbody>
</table>

* GP workforce numbers from RDN Database November 2002

Figure 3: Average Number of Advertised Vacancies per Booklet per Year

Average Vacancies Per Book

Source: RDN, 2003
Table 31 shows the current characteristics of the clusters and also the “actual” vacancies per cluster. Applying the definition of GP actual vacancies as defined above, the number of advertised vacancies that were “actual” vacancies at 30th November 2002 was reduced from 164 to 130.

Table 31 shows:

- The correlation between average hours worked and the GP to population ratio is approximately 0.8 indicating a relationship. In other words the figures back up what may seem self evident, namely, that where the GP:population ratio is higher, the GPs are working longer hours. If the GP:population ratio were to come down, it would be expected that GPs would work fewer hours per week. Cluster 2 has a very large proportion of GPs working more 60 hrs/week while Cluster 8 has a relatively small proportion.

- The GP to population ratios are lower in Clusters 8 and 9; higher in Clusters 5 and 11.

- Clusters 1 and 2 have very high proportions of indigenous population.

- Looking at the vacancies per 10,000, Clusters 1 and 5 have proportionally larger numbers of vacancies.

Table 31: Analysis of Actual GP Vacancies by Cluster, November 2002

<table>
<thead>
<tr>
<th>Cluster (refer Table 29 for Cluster name)</th>
<th>Estimated Resident Pop'n 2002</th>
<th>Approx Indigenous</th>
<th>% Indigenous</th>
<th>GP Count</th>
<th>Population to GP ratio</th>
<th>Avg of Hours Worked</th>
<th>% of GPs working &gt; 60 hrs/wk</th>
<th>Actual Vacancies</th>
<th>Vacancies per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>141,758</td>
<td>16,599</td>
<td>11.71%</td>
<td>121</td>
<td>1,172</td>
<td>42.28</td>
<td>25.6%</td>
<td>16</td>
<td>11.3</td>
</tr>
<tr>
<td>2</td>
<td>169,542</td>
<td>12,862</td>
<td>7.59%</td>
<td>137</td>
<td>1,238</td>
<td>56.08</td>
<td>33.6%</td>
<td>15</td>
<td>8.8</td>
</tr>
<tr>
<td>3</td>
<td>140,962</td>
<td>4,226</td>
<td>3.00%</td>
<td>107</td>
<td>1,317</td>
<td>49.64</td>
<td>24.3%</td>
<td>11</td>
<td>7.8</td>
</tr>
<tr>
<td>4</td>
<td>128,227</td>
<td>5,083</td>
<td>3.96%</td>
<td>116</td>
<td>1,105</td>
<td>42.60</td>
<td>20.7%</td>
<td>8</td>
<td>6.2</td>
</tr>
<tr>
<td>5</td>
<td>185,826</td>
<td>6,109</td>
<td>3.29%</td>
<td>126</td>
<td>1,475</td>
<td>54.09</td>
<td>23.0%</td>
<td>21</td>
<td>11.3</td>
</tr>
<tr>
<td>6</td>
<td>226,559</td>
<td>7,296</td>
<td>3.22%</td>
<td>189</td>
<td>1,199</td>
<td>42.80</td>
<td>19.1%</td>
<td>16</td>
<td>7.1</td>
</tr>
<tr>
<td>7</td>
<td>168,030</td>
<td>7,052</td>
<td>4.20%</td>
<td>147</td>
<td>1,143</td>
<td>46.93</td>
<td>27.9%</td>
<td>11</td>
<td>6.5</td>
</tr>
<tr>
<td>8</td>
<td>90,739</td>
<td>3,858</td>
<td>4.25%</td>
<td>97</td>
<td>935</td>
<td>36.76</td>
<td>10.3%</td>
<td>5</td>
<td>5.5</td>
</tr>
<tr>
<td>9</td>
<td>128,304</td>
<td>3,907</td>
<td>3.05%</td>
<td>121</td>
<td>1,060</td>
<td>40.71</td>
<td>20.7%</td>
<td>4</td>
<td>3.1</td>
</tr>
<tr>
<td>10</td>
<td>175,838</td>
<td>4,306</td>
<td>2.45%</td>
<td>126</td>
<td>1,396</td>
<td>48.75</td>
<td>29.4%</td>
<td>15</td>
<td>8.5</td>
</tr>
<tr>
<td>11</td>
<td>94,291</td>
<td>2,427</td>
<td>2.57%</td>
<td>60</td>
<td>1,572</td>
<td>54.36</td>
<td>31.7%</td>
<td>8</td>
<td>8.5</td>
</tr>
<tr>
<td>TOTALS</td>
<td>1,650,076</td>
<td>73,724</td>
<td>1,347</td>
<td>24.1</td>
<td>130</td>
<td>7.9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0.831 = Correlation coefficient: Average Hours Worked with GP to Population ratio

Sources:
The average hours worked, the GP count and the number of GPs working more than 60 hrs/week are taken from the RDN database at 30th November 2002. Population figures are from the ABS 1996 census.

The second method to determine the current level of under supply is to apply the Medical Workforce Supply Estimates (MWSE) planning tool. This was developed as a basic planning spreadsheet by QRMSA. It is based on implied medical practitioner requirements recommended by the Australian Medical Workforce Advisory Committee (AMWAC Report 2000.2). The assumptions and data sources utilised by the AMWAC General Practice Workforce Working Party are detailed in the AMWAC report (see AMWAC Report 2000.2 pp 46 – 51) and are primarily based on whole patient equivalents (WPEs) from HIC data for 1998 – 1999. Further adjustments were made for the population in rural and remote areas who are being treated in services not billing Medicare or the Department of Veterans Affairs. Once the baseline WPEs have been calculated, further adjustments were made for:

- socioeconomic advantage and disadvantage;
- the lower proportion of the population in other rural and remote areas receiving GP services through Medicare; and
- age and sex of patients.

Based on these adjustments, AMWAC contended that for the rural workforce, the average patient encounters per capita per year needing to be serviced for GPs was 7.1, comprising 6.2 private practice and an estimated 0.9 public hospital outpatients.

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4 Refer to Table 29 for the Cluster names
5 See AMWAC Report 2000.2 pp 46-51
In 1998-99 the average full-time GP provided 6,440 Medicare/DVA patient billed attendances and this equates to 7,185 patient encounters per year after adjusting for non-Medicare/DVA work. It is these figures (7.1 average patient encounters per capita per year and the 7,185 patient encounters per year) that provide the basis of AMWAC supply requirements. These supply requirements imply that the ideal doctor to population ratio should be 1:1012.

Acceptance of the AMWAC methodology provides a means of estimating medical practitioner supply requirements for individual communities, Local Government Areas, Divisions of General Practice or Statistical Divisions. ¹

In adopting the AMWAC methodology, RDN acknowledges that there are limitations but has accepted that it provides a basis for estimating current and future GP demand requirements. The limitations may in isolation, or in combination, impact on GP workforce demand projections and, as such, the methodology presents a platform for planning rather than a definitive statement. In other words, it provides a platform for discussion, which can be informed by ‘on the ground realities’. A number of these limitations are discussed below:

- The Estimated Resident Population (ERP) is based on 1996 ABS census. The ERP projections based on the 2001 Census are not yet available to RDN.
- The model also tends to assume that the population of a given cluster will only access services in that locality. The “on the ground reality” is that in many clusters, a proportion of the population may access services outside that locality.
- The model assumes that GP supply should match demand for GPs. There are many factors that mitigate against this ‘ideal’ including geography, distance, settlement patterns and economic viability.
- The model makes no adjustment for procedural general practice workload.
- Weighting for tourists and seasonal workers has not been applied. The areas affected by these inflows are primarily the coastal areas and Snow country (tourists) and Riverina area (seasonal workers).

So, while the MWSE planning tool provides a reasonable basis for the estimation of supply and demand in localities and LGAs, methodologies such as these can only be used as a guide or starting point. Measurement of GP demand in a particular community or region needs to be undertaken in consultation with local practitioners, utilize local knowledge and take into account ‘on ground realities’.

The MWSE tool is based on the following assumptions and inputs:

- GP count is derived from RDN’s database as at 30th November 2002.
- Estimated resident population (ERP) is based on 1996 ABS census figures. ERP data by LGA, by age group, by gender based on 1996 census was used, in conjunction with the Standardised Whole Patient Equivalent² (SWPE) Indices, to calculate the SWPE for each LGA for the years 2002, 2007 and 2012.
- The shortfall is the difference between the MWSE FWE and the RDN GP count.

The MWSE FWE was then calculated according to the following formula:

\[
[WWESE FWE] = [SWPE] / [Population Ratio]
\]

The [Population Ratio] used was 1,012 (calculated from 7.1 encounters per person per year and 7,185 encounters per GP per year from AMWAC Report 2000.2 as described above.

These figures were then aggregated up to Division, Cluster and finally Projection Year to estimate future demand for GP services. The Shortfall State is calculated from the MSWE FWE minus GP count. The Shortfall State by individual Clusters are indicative figures only because they are based on the state average working hours/week rather than the working hours for that particular Cluster.

The current total shortfall using these assumptions and applying the MWSE model is estimated to be 287 GPs based on State FWE (Table 32). This figure is very different from the estimated shortfall obtained in the GP vacancy analysis of 130 (Table 31). This figure could in part reflect unmet need or need that cannot be met due to economic viability limitations of current practice structures. A further explanation is, however, that the methodology is not adequately refined as the “on the ground reality” is that 287 additional GPs could not be placed in rural NSW at present and maintain sustainable practices. This demonstrates why this workforce planning exercise is much more than a quantitative modelling exercise.

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¹ The AMWAC methodology works on the assumption that 1 GP works 54 hours/week. While the RDN average clinical hours worked per week is currently less than this, we have accepted (for the purposes of this methodology) that 1 AMWAC GP = 1 RDN GP for the following reasons:

- AMWAC includes non clinical hours (which increases the RDN hours considerably as weekly hours would then include Divisional work, teaching work etc)
- The AMWAC hours were calculated in 2000 and average RDN hours were then 54 hours/week.

² Standardised Whole Patient Equivalent (SWPE) weights Whole Patient Equivalent (WPE) data according to age and gender. WPE is an estimate of GP workload based on what a GP might be expected to work based on the number of patient encounters on the basis of population need. See AMWAC Report 2000.2 pp46-47 and pp104-105 for a full explanation. The SWPE takes into account the fact that certain age group and gender cohorts use GP services at a higher rate than other age and gender cohorts.
Methodology for Projecting Supply to 2012

Having established an estimate of the current level of GP under supply, a model to project the GP workforce supply out until 2012 is required. The baseline for the model is the November 2002 GP numbers (from the RDN database) by gender. Figure 3 summarises the steps in the supply analysis process. 

5.4 Methodology for Projecting Supply to 2012

Having established an estimate of the current level of GP under supply, a model to project the GP workforce supply out until 2012 is required. The baseline for the model is the November 2002 GP numbers (from the RDN database) by gender. Figure 3 summarises the steps in the supply analysis process.

Postscript: A comment about overseas trained doctors:

It is often claimed that positions filled by temporary resident overseas trained doctors (TROTDs) provide a further indication of potential shortage. Some of these positions are filled by TROTDs for a defined period and are ideally suited to OTDs on a working holiday. However, others could be more appropriately filled by an Australian trained GP or a suitably skilled permanent resident overseas trained doctor (PROTD), if one were available and willing to work in the position. Unfortunately in many instances appropriately skilled Australian doctors are not available or willing to work in these positions. Temporary visa doctors are therefore a valuable component of the rural medical workforce.

Table 32: RDN’s MWSE Requirement Analysis Model - The total shortfall of GPs by Cluster November 2002

<table>
<thead>
<tr>
<th>Cluster ID</th>
<th>GP Count</th>
<th>SWPE*</th>
<th>Estimated Resident population (ERP)</th>
<th>MWSE FWE</th>
<th>Shortfall State**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>121</td>
<td>138,850</td>
<td>141,758</td>
<td>137</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>137</td>
<td>167,318</td>
<td>169,542</td>
<td>165</td>
<td>28</td>
</tr>
<tr>
<td>3</td>
<td>107</td>
<td>142,858</td>
<td>140,962</td>
<td>141</td>
<td>34</td>
</tr>
<tr>
<td>4</td>
<td>116</td>
<td>129,575</td>
<td>128,227</td>
<td>128</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>126</td>
<td>182,329</td>
<td>185,826</td>
<td>180</td>
<td>54</td>
</tr>
<tr>
<td>6</td>
<td>189</td>
<td>231,005</td>
<td>226,559</td>
<td>228</td>
<td>39</td>
</tr>
<tr>
<td>7</td>
<td>147</td>
<td>164,687</td>
<td>168,030</td>
<td>163</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>97</td>
<td>95,809</td>
<td>90,739</td>
<td>95</td>
<td>(2)</td>
</tr>
<tr>
<td>9</td>
<td>121</td>
<td>132,099</td>
<td>128,304</td>
<td>131</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>126</td>
<td>175,861</td>
<td>175,838</td>
<td>174</td>
<td>48</td>
</tr>
<tr>
<td>11</td>
<td>60</td>
<td>92,895</td>
<td>94,291</td>
<td>92</td>
<td>32</td>
</tr>
<tr>
<td>TOTALS</td>
<td>1,347</td>
<td>1,653,286</td>
<td>1,650,076</td>
<td>1,634</td>
<td>287</td>
</tr>
</tbody>
</table>

* SWPE was calculated by multiplying the ERP in age and gender groupings
** Shortfall State is calculated from the State FWE minus GP count. The Shortfall State by Clusters are indicative figures only because they are based on the State average working hours/week rather than the working hours for that particular Cluster.

Source: Figure provided by AMWAC
Sources of arrivals to the rural and remote GP workforce are:

- GP registrars staying in rural practice after completion of the GP training program
- Australian Medical Council (AMC) graduates
- Temporary resident overseas trained doctors (TROTDs)
- Permanent resident overseas trained doctors (PROTDs)
- GPs from interstate
- GPs from metropolitan NSW

Causes of departures from the rural and remote GP workforce include:

- Going on extended leave
- Retiring
- Going to work in an urban area
- Going to work interstate
- Leaving general practice for other work eg entering the hospital workforce or working full time with a Division

Arrivals and departures from the GP workforce are written into the supply model by utilising calculated percentage gains of males, females and total GPs in three scenarios (as described below).

Other factors affecting future workforce supply are increasing female participation rates and reductions in the clinical hours worked by both males and females. Female participation rates are important as female practitioners generally work fewer hours than their male counterparts. Reductions in hours worked by male and female GPs will obviously have an impact on future supply. RDN supply projections, based on maintenance of (i) current participation rates and (ii) decreasing participation rates, are included.

The supply projection model has the following assumptions and inputs:

- The RDN head count of GPs is from the RDN database (30 Nov 2002) and is 962 male GPs and 385 female GPs, giving a total of 1,347 GPs. Arrivals and departures of GPs (Table 33) into and out of rural practice is based on arrivals and departures for the twelve month period 1 Jan 2002 to 31 Dec 2002. This period provided the best available data for estimating the current trend in GP movements into and out of rural and remote NSW.

### Table 33: Arrivals and departures from the GP workforce RRMAs 3-7 January to December 2002

<table>
<thead>
<tr>
<th>Arrivals</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMC Graduates</td>
<td>4</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>GPs from interstate</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Locum doctors</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Permanent Resident OTDs (PROTDs)</td>
<td>23</td>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td>GP Registrars staying in rural practice after completion of their GP training</td>
<td>6</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Temporary Resident OTDs (TROTD)</td>
<td>13</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>GPs coming from urban practices</td>
<td>9</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Total Arrivals</td>
<td>67</td>
<td>36</td>
<td>103</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Departures</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Going to hospital workforce</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Interstate</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Going on extended leave</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Left Rural practice altogether</td>
<td>14</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Becoming Locum doctors</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Maternity leave</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Retired</td>
<td>13</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Study leave</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Going into urban</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Total Departures</td>
<td>51</td>
<td>23</td>
<td>74</td>
</tr>
<tr>
<td>Net Gain</td>
<td>16</td>
<td>13</td>
<td>29</td>
</tr>
</tbody>
</table>

| Gain %                                               | 1.66% | 3.38% | 2.15% |

Source: Data comes from Tables 22 and 23 in Chapter 4.2. The source is the RDN Database for 2002
NB this does not include movements of GPs within rural and remote NSW.
• Average weekly clinical hours worked by rural GPs in 2002 are based on self reported hours (RDN database November 2002) of:
  Male = 52.7 clinical hours/week
  Female = 31.2 clinical hours/week
  Overall average = 46.6 clinical hours/week

For the purposes of this report clinical hours worked are those hours spent in “direct patient care” defined as:

The hours spent seeing patients in their rooms and in hospitals, on call hours actually worked (but not on call hours not worked), travel time to other patient care settings eg satellite surgeries, hours worked in public health and population health endeavors; but not teaching time per se or hours spent in Divisional activities.

• Age/Gender Weightings

To calculate population figures standardised for age and gender, estimated resident populations for each LGA have been weighted using the age/gender weights provided by HIC for June 2002 (Table 34). Weightings are applied as certain age and gender cohorts are greater uses of GP services.

Table 34: Age/Gender Weights for Standardisation

<table>
<thead>
<tr>
<th>Age(years)</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>0.9924</td>
<td>0.9279</td>
</tr>
<tr>
<td>5-14</td>
<td>0.5649</td>
<td>0.564</td>
</tr>
<tr>
<td>15-24</td>
<td>0.571</td>
<td>0.8749</td>
</tr>
<tr>
<td>25-44</td>
<td>0.7006</td>
<td>1.0271</td>
</tr>
<tr>
<td>45-64</td>
<td>0.9445</td>
<td>1.1766</td>
</tr>
<tr>
<td>65-74</td>
<td>1.4666</td>
<td>1.9315</td>
</tr>
<tr>
<td>75+</td>
<td>2.0537</td>
<td>2.3409</td>
</tr>
</tbody>
</table>

Source: HIC

• The SEIFA Index has been used for the socioeconomic weightings. The population has been divided by the SEIFA index. The index is based on 1996 census data and it provides a mechanism for identifying and quantifying the numbers of people in highly disadvantaged and highly advantaged communities, who are known to have above and below average levels of morbidity and mortality. (The SEIFA Index based on the 2001 census will not be available until later in 2003). The index used is the Index of Disadvantage. The mean of this Index for all areas is 1000. The Index of Disadvantage is a useful measure of socioeconomic disadvantage, although it has limitations as changes to the variables that underpin the index may change the values calculated. It is likely that the relativity would be unchanged in most circumstances. The SEIFA adjusted Estimated Resident Populations by LGA are provided at the end of this Chapter (Table 38).

Three scenarios are presented using the supply model:

Scenario 1 is a projection of supply based on the above assumptions with GPs maintaining a constant workforce participation rate (ie clinical hours worked remain constant). Scenarios 2 and 3 factor in a reduction in clinical hours worked because self-reported clinical hours worked by rural GPs are falling. Western Australia has reported that the hours worked by their rural and remote GPs have fallen by 5% between 2001 and 2002. WACRRM has, however, chosen to factor a more conservative 2% reduction per annum into its workforce modelling because it believes that data for 2001/02 may be atypical for a number of reasons.

RDN has selected to also use a figure of 2% per annum reduction for the projections.

Scenario 2 is a projection of supply based on the above assumptions with a reduction in the hours worked by males of 2% annually. This scenario assumes that female hours worked will not decrease any further from their current level of 31.2 hours.

Scenario 3 is a projection of supply based on the above assumptions with a reduction in the hours worked by both males and females of 2% annually.

The summary table for the three scenarios is presented in Table 35. The full model is presented in Appendix A.

In interpreting the supply projection model:

• 2002 NSW FWE: This a full time work equivalent figure based on the average number of hours worked by GPs in rural and remote NSW during 2002. This figure is provided as a reference for comparison with the current workforce supply.

• ABS FWE: This is a full time work equivalent based on the ABS definition of full time, which is 35 hours per week.

• AMWAC FWE: This is a full time work equivalent based on the AMWAC definition of full time of 54 hours per week (AMWAC, 2000.2, p67).
Table 35: Summary of RDN’s Supply Projections 2002 – 2012

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>Scenario 1 (no change in hours worked)</th>
<th>Scenario 2 (2% reduction in male hours worked &amp; no change in female hours)</th>
<th>Scenario 3 (2% reduction in hours worked by both males and females)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average hours per week female</td>
<td>31.2</td>
<td>N/A</td>
<td>31.2</td>
<td></td>
</tr>
<tr>
<td>Average hours per week male</td>
<td>52.7</td>
<td>N/A</td>
<td>43.1</td>
<td></td>
</tr>
<tr>
<td>Overall Average hours per week</td>
<td>46.6</td>
<td>46.6</td>
<td>39.3</td>
<td>38.1</td>
</tr>
<tr>
<td>%Female</td>
<td>28.6%</td>
<td>32.1%</td>
<td>32.1%</td>
<td>32.1%</td>
</tr>
<tr>
<td>N</td>
<td>385</td>
<td>537</td>
<td>537</td>
<td>537</td>
</tr>
<tr>
<td>% Diff</td>
<td></td>
<td>39.4%</td>
<td>39.4%</td>
<td>32.1%</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>962</td>
<td>1135</td>
<td>1135</td>
<td>1135</td>
</tr>
<tr>
<td>GPs</td>
<td>1347</td>
<td>1671</td>
<td>1671</td>
<td>1671</td>
</tr>
<tr>
<td>2002 NSW FWE</td>
<td>1347</td>
<td>1671</td>
<td>1408</td>
<td>1365</td>
</tr>
<tr>
<td>ABS FWE</td>
<td>1792</td>
<td>2225</td>
<td>1874</td>
<td>1918</td>
</tr>
<tr>
<td>AMWAC FWE</td>
<td>1161</td>
<td>1442</td>
<td>1215</td>
<td>1178</td>
</tr>
</tbody>
</table>

% difference = difference between 2012 figure and 2002 figure

5.5 Methodology for Projecting Future Demand

Requirements analysis provides information on the demands that are likely to be made of the workforce in the future. If the current workforce is meeting requirements then it is assumed that the workforce is in balance, and requirements equal supply. As there is, however, an estimated current under supply of between 130 and 287 GPs in NSW (see Section 5.3 of this chapter), then the current workforce will have to be adjusted upwards to take into account this deficit and this forms the baseline from which future requirements are projected.

Future requirements are projected by applying a growth factor to the baseline requirements level. This growth factor represents an indication of the predicted change in requirements during the period to 2012. The projected growth in population is used to calculate the estimated future growth in requirements for GP services. However, as the utilisation rate of GP services does vary by gender and age group (e.g., those in the highest age groups use more services per capita, as compared with people in other age groups), the projected growth in population by gender/age group has also been considered. SEIFA weightings have also been applied to account for socio economic variations.

At this stage, the other factors of health expectations, technological changes, disease incidence and changes in service utilisation have not been included in the growth factoring. For this modelling exercise we have assumed that these will balance each other, for instance, that technology advances will balance increased consumer expectations.

Data on projected population trends, by age/gender groups, has been obtained from the Australian Bureau of Statistics using 1996 census data.

Table 36 below displays the estimated resident populations for the years 2002, 2007 and 2012 in raw numbers and for the SWPEs using the age/gender and SEIFA weightings described above.
Thus in 2012, based on projected population changes alone, rural and remote NSW will need to find a further:

- 428 general practitioners using the MWSE planning tool; or
- 293 general practitioners using the “Real Vacancies” planning tool.

5.6 Balancing Supply Against Requirements

Table 37 and Figure 4 below display projected supply figures from the three scenarios described in Section 5.4 and projected requirement figures from Section 5.5 using both the MWSE planning tool and the “Real Vacancies” planning tool.

Table 36: Projected GP Requirements 2002, 2007 and 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>GP Count 2002</th>
<th>Estimated Resident Pop'n</th>
<th>SWPE</th>
<th>MWSE FWE</th>
<th>MWSE Shortfall</th>
<th>State FWE using “Real Vacancies”</th>
<th>Shortfall State using “Real Vacancies”</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>1347</td>
<td>1,650,076</td>
<td>1,653,286</td>
<td>1,634</td>
<td>287</td>
<td>1,477</td>
<td>130</td>
</tr>
<tr>
<td>2007</td>
<td>1347</td>
<td>1,693,594</td>
<td>1,725,902</td>
<td>1,705</td>
<td>358</td>
<td>1,559</td>
<td>212</td>
</tr>
<tr>
<td>2012</td>
<td>1347</td>
<td>1,728,264</td>
<td>1,796,404</td>
<td>1,775</td>
<td>428</td>
<td>1,640</td>
<td>293</td>
</tr>
</tbody>
</table>

With the MWSE planning tool there is a shortfall between projected demand for GP FWEs in 2012 and the projected supply of GP FWEs, regardless of which of the three modelling scenarios is used, but particularly in Scenarios 2 and 3, where GP hours are predicted to fall.

With the “Real Vacancies” planning tool there is a shortfall between the projected demand for GP FWEs and the projected supply of GP FWEs for scenarios 2 and 3, where GP hours are projected to fall. Scenario 1, where GP hours remain constant, is not a realistic scenario as all indications are that GP hours are falling.

Obviously it is simply not going to be possible to maintain the required GP services to the rural population with this predicted decline in GP FWE numbers. Major changes will need to be made to ensure maintenance of the current level of service. These changes will have to encompass a wide range of facets of the provision of GP services. What is expected of a GP, how practices are run, how they are financed and how general practice is integrated with other services will all need major revision if the basic need of access to health care is to be met in rural NSW in 2012. Significant thought will need to go into the sourcing of any increase in GP numbers. Present sources, especially from Australian training programs and from AMC graduates will not meet the demand for GP services in 2012. The potential workforce from permanent resident OTDs (PROTDs) can only be maximised with significant investment in training and education. It will be interesting to see, longer term, the effect on the rural workforce of the new 234 medical school places created each year which are bonded to areas of workforce shortage.

Table 37: Projected Supply and Demand 2002, 2007 and 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Demand (FWE using MSWE planning tool)</th>
<th>Supply (Scenario 1)</th>
<th>Supply (Scenario 2)</th>
<th>Supply (Scenario 3)</th>
<th>Deficit (Scenario 1)</th>
<th>Deficit (Scenario 2)</th>
<th>Deficit (Scenario 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>1,634</td>
<td>1,347</td>
<td>1,347</td>
<td>1,347</td>
<td>287</td>
<td>287</td>
<td>287</td>
</tr>
<tr>
<td>2007</td>
<td>1,705</td>
<td>1,499</td>
<td>1,372</td>
<td>1,355</td>
<td>206</td>
<td>333</td>
<td>350</td>
</tr>
<tr>
<td>2012</td>
<td>1,775</td>
<td>1,671</td>
<td>1,408</td>
<td>1,365</td>
<td>104</td>
<td>367</td>
<td>410</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Demand (FWE using “Real Vacancies” planning tool)</th>
<th>Supply (Scenario 1)</th>
<th>Supply (Scenario 2)</th>
<th>Supply (Scenario 3)</th>
<th>Deficit (Scenario 1)</th>
<th>Deficit (Scenario 2)</th>
<th>Deficit (Scenario 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>1,477</td>
<td>1,347</td>
<td>1,347</td>
<td>1,347</td>
<td>130</td>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td>2007</td>
<td>1,559</td>
<td>1,499</td>
<td>1,372</td>
<td>1,355</td>
<td>60</td>
<td>187</td>
<td>204</td>
</tr>
<tr>
<td>2012</td>
<td>1,640</td>
<td>1,671</td>
<td>1,408</td>
<td>1,365</td>
<td>(31)</td>
<td>232</td>
<td>275</td>
</tr>
</tbody>
</table>
Figure 4: NSW Rural GP Supply v Demand Projections

Table 38: SEIFA Adjusted ERP by LGA for 2002

<table>
<thead>
<tr>
<th>Cluster</th>
<th>LGA Name</th>
<th>SEIFA Index</th>
<th>ERP 2002</th>
<th>SEIFA Adjusted ERP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Walgett (A)</td>
<td>855.90</td>
<td>8,289.00</td>
<td>9,684.54</td>
</tr>
<tr>
<td>1</td>
<td>Brewarrina (A)</td>
<td>860.50</td>
<td>2,175.00</td>
<td>2,527.60</td>
</tr>
<tr>
<td>1</td>
<td>Central Darling (A)</td>
<td>865.60</td>
<td>2,424.00</td>
<td>2,800.37</td>
</tr>
<tr>
<td>1</td>
<td>Bourke (A)</td>
<td>914.90</td>
<td>3,947.00</td>
<td>4,314.13</td>
</tr>
<tr>
<td>1</td>
<td>Broken Hill (C)</td>
<td>916.10</td>
<td>20,908.00</td>
<td>22,822.84</td>
</tr>
<tr>
<td>1</td>
<td>Coonamble (A)</td>
<td>923.50</td>
<td>4,801.00</td>
<td>5,198.70</td>
</tr>
<tr>
<td>1</td>
<td>Wellington (A)</td>
<td>927.10</td>
<td>8,761.00</td>
<td>9,449.90</td>
</tr>
<tr>
<td>1</td>
<td>Bogan (A)</td>
<td>933.90</td>
<td>3,162.00</td>
<td>3,385.80</td>
</tr>
<tr>
<td>1</td>
<td>Coonabarabran (A)</td>
<td>934.70</td>
<td>6,833.00</td>
<td>7,310.37</td>
</tr>
<tr>
<td>1</td>
<td>Narromine (A)</td>
<td>944.20</td>
<td>7,101.00</td>
<td>7,520.65</td>
</tr>
<tr>
<td>1</td>
<td>Cobar (A)</td>
<td>945.80</td>
<td>5,157.00</td>
<td>5,452.53</td>
</tr>
<tr>
<td>1</td>
<td>Warren (A)</td>
<td>946.10</td>
<td>3,310.00</td>
<td>3,498.57</td>
</tr>
<tr>
<td>1</td>
<td>Gilgandra (A)</td>
<td>951.20</td>
<td>4,777.00</td>
<td>5,022.08</td>
</tr>
<tr>
<td>1</td>
<td>Mudgee (A)</td>
<td>951.70</td>
<td>18,464.00</td>
<td>19,401.07</td>
</tr>
<tr>
<td>1</td>
<td>Coolah (A)</td>
<td>951.80</td>
<td>3,945.00</td>
<td>4,144.78</td>
</tr>
<tr>
<td>1</td>
<td>Unincorporated NSW</td>
<td>977.80</td>
<td>1,208.00</td>
<td>1,235.43</td>
</tr>
<tr>
<td>1</td>
<td>Dubbo (C)</td>
<td>982.00</td>
<td>38,902.00</td>
<td>39,615.07</td>
</tr>
<tr>
<td>2</td>
<td>Guyra (A)</td>
<td>911.70</td>
<td>4,488.00</td>
<td>4,922.67</td>
</tr>
<tr>
<td>2</td>
<td>Barraba (A)</td>
<td>919.70</td>
<td>2,232.00</td>
<td>2,426.88</td>
</tr>
<tr>
<td>2</td>
<td>Bingara (A)</td>
<td>924.70</td>
<td>2,055.00</td>
<td>2,222.34</td>
</tr>
<tr>
<td>2</td>
<td>Manilla (A)</td>
<td>925.90</td>
<td>3,300.00</td>
<td>3,564.10</td>
</tr>
<tr>
<td>2</td>
<td>Tenterfield (A)</td>
<td>926.10</td>
<td>6,873.00</td>
<td>7,421.44</td>
</tr>
<tr>
<td>2</td>
<td>Moree Plains (A)</td>
<td>940.20</td>
<td>16,242.00</td>
<td>17,275.05</td>
</tr>
<tr>
<td>2</td>
<td>Glen Innes (A)</td>
<td>945.70</td>
<td>6,020.00</td>
<td>6,365.66</td>
</tr>
<tr>
<td>2</td>
<td>Severn (A)</td>
<td>950.40</td>
<td>2,868.00</td>
<td>3,017.68</td>
</tr>
<tr>
<td>Cluster</td>
<td>LGA Name</td>
<td>SEIFA Index</td>
<td>ERP 2002</td>
<td>SEIFA Adjusted ERP</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------</td>
<td>-------------</td>
<td>-----------</td>
<td>--------------------</td>
</tr>
<tr>
<td>2</td>
<td>Inverell (A)</td>
<td>950.70</td>
<td>15,827.00</td>
<td>16,647.73</td>
</tr>
<tr>
<td>2</td>
<td>Gunnedah (A)</td>
<td>958.10</td>
<td>12,503.00</td>
<td>13,049.79</td>
</tr>
<tr>
<td>2</td>
<td>Nundle (A)</td>
<td>963.70</td>
<td>1,331.00</td>
<td>1,381.14</td>
</tr>
<tr>
<td>2</td>
<td>Narrabri (A)</td>
<td>964.00</td>
<td>14,477.00</td>
<td>15,017.63</td>
</tr>
<tr>
<td>2</td>
<td>Quirindi (A)</td>
<td>970.10</td>
<td>4,998.00</td>
<td>5,152.05</td>
</tr>
<tr>
<td>2</td>
<td>Yarraroi (A)</td>
<td>971.00</td>
<td>3,235.00</td>
<td>3,331.62</td>
</tr>
<tr>
<td>2</td>
<td>Tamworth (C)</td>
<td>976.40</td>
<td>36,952.00</td>
<td>37,845.15</td>
</tr>
<tr>
<td>2</td>
<td>Walcha (A)</td>
<td>979.70</td>
<td>3,298.00</td>
<td>3,366.34</td>
</tr>
<tr>
<td>2</td>
<td>Uralla (A)</td>
<td>997.70</td>
<td>6,082.00</td>
<td>6,096.02</td>
</tr>
<tr>
<td>2</td>
<td>Parry (A)</td>
<td>1,000.80</td>
<td>12,864.00</td>
<td>12,853.72</td>
</tr>
<tr>
<td>2</td>
<td>Armidale Dumaresq (A)</td>
<td>1,022.10</td>
<td>24,804.00</td>
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Note: SEIFA indices for Pristine Waters and Evans LGAs were not available, so the mean (1000) was used.
Chapter 6: Community Consultations

6.1: Introduction
The NSW Rural Doctors Network held seven community consultations for the GP Workforce Plan (the Plan) in March, May and July 2003. These were held in Orange, Dubbo, Coffs Harbour, Wagga Wagga, Tamworth, Broken Hill and in Sydney (with the NSW Rural Medical Support Forum). The purpose of the consultations was to gain community and medical and health professional input into rural and remote medical workforce planning in NSW. Two parallel processes were in operation – the first to guide RDN in the preparation of its workforce plan, and the second, to have input into the national AMWAC review of general practice. Approximately 25 participants attended each consultation, representing rural and remote GPs, Divisions of General Practice, Area Health Services and hospitals, local government, consumer groups, the County Women’s Association, the NSW Rural Doctors Association, the Rural Doctors Association of Australia, University Departments of Rural Health, Rural Clinical Schools, the three Medical Faculties, the Rural Health Training Units, RFDS and AMWAC. The participant list is included in Chapter 6.4.

Each of the consultations followed the same format with Kirsty McEwin from RDN explaining the process of workforce planning and stating the purpose of the consultation, then handing over to the facilitator, Doug Smith, from Palm Management. He started with a brief analysis of rural and remote general practice. This was followed by exploration of the changing profile of patients; the changing profile of rural and remote GPs; the changing practice structures; and consideration of the issues that make rural workforce planning distinctive from national workforce planning. The process was, however, sufficiently flexible to allow each of the consultations to take its own direction and this did happen. Some of the participants had read a very early draft of the first three chapters of the Plan but most came to the consultations without any pre reading. A few individuals (GPs and Divisional staff) who were unable to attend the consultations provided written or verbal submissions. The questions posed in the consultations were:

- Does workforce planning for the rural and remote general practice workforce differ from workforce planning for other areas of the medical workforce? If so how?
- What is the current level of under supply in the area (or Division)? What is this likely to be in 10 years? Better or worse?
- What are the changing work and career expectations of rural general practitioners?
- What are the changes in practice structure, such as moves away from solo to group practices?
- How robust is the data?

Ideally the consultations could also have considered the methodology and modelling used by RDN in projecting GP supply and demand requirements for 2012. This was not possible as these were not developed in time for the consultations.

There were many similarities in the issues raised but there were also variations on themes and some regional differences. All participants agreed that there are very distinctive issues for rural and remote planning compared with the national planning undertaken by AMWAC. Hence the need for separate rural medical workforce planning and for this to inform a national plan.

6.2: Findings from the Community Consultations
The areas where there was general agreement were as follows:

The advantages of rural and remote general practice:
- Broader, more encompassing professional practice; more professionally satisfying – from cradle to grave and the range of skills – the 'specialist’ GP/ procedural work
- Self sufficiency/ self reliance
- Closer relationships with specialists and support from specialists
- Collaboration with other health professionals – health services are more integrated
- Better relationships with patients/ community interaction – as one GP said "the people who remember you are those whose babies you’ve delivered”
- Rural lifestyle benefits
- The work the GP does is important

The weaknesses of rural and remote general practice:
- Extra training involved and extra responsibilities/ skills maintenance and having the structure in place to be able to use the skills
- Lack of supporting health professionals, eg allied health professionals
- Too much work and lack of respite/ expectations of the “super doc”
- Locum difficulties
- Lack of educational opportunities for GPs / lack of broadband in many areas
- Transport limitations for patients
- Isolation/ being on a pedestal, in a fishbowl
- It’s more costly to establish and run a practice
The opportunities in rural and remote general practice:
- IT improving educational opportunities
- There are votes in rural issues => Able to effect change/ recruitment and retention strategies/ easier to have a unified voice e.g. through RDA, NSW
- Can be financially better off than city counterparts if put in the hard yakka
- Community support
- Divisions of GP have helped to reduce isolation
- Schools of Rural Health/ University Departments of Rural Health
- Opportunities exist to develop alternative models of practice
- Close collaboration with other health and medical professionals and for partnerships with eg practice nurses

The threats in rural and remote general practice:
- Indemnity and litigation issues
- Lack of other staff eg allied health, nursing
- Uncertainty of funding
- Shift in policy attention from rural to outer metropolitan
- Family and spouse needs
- Theatre closures/ downgrading of facilities
- GP burnout – GPs are not just in practice but on all committees and also teach undergraduates and postgraduates
- Ageing GP population
- The newer GPs have very different expectations and profiles
- The decline of rural communities

The patient profile has changed:
- Patients have become sicker, older and poorer, more depressed
- GPs are seeing more chronic illnesses and disabilities
- More patients present with mental illnesses; greater acceptance of mental illness
- Patients are more likely to talk about incest, domestic violence and so on
- Patients have higher expectations/ are more informed as consumers – the GP can no longer say "trust me I’m a doctor"
- Families of patients have higher expectations which are often unrealistic
- Patients tend to want a quick (technological) fix
- Patients are more litigious but still less litigious than urban patients => patients are more forgiving in rural areas. They will tell you now what they are forgiving you for
- Patients are loyal, even though there is doctor shopping
- Patients expect rural GPs to do more for them than their urban counterparts would of their GPs, eg expect GPs to advocate on their behalf to get into other services
- Need to make distinction between regional, rural and remote patients
- Distance and poor, or no, public transport remain issues for patients
- Families are more dislocated/fragmented and smaller; there is less support available for families and within extended families
- Male patients are still stoic and likely to present late with complex conditions
- Access and reference to internet and media reports have increased (increased media reporting on medical issues eg HRT; also new SMH weekly supplement of health and wellbeing; SMH regularly reports from New England Journal of Medicine etc). This means patients can be more informed but also more misinformed
- Also drug companies are using the media more, for example, GPs reported that patients are requesting weight reduction or anti smoking drugs they have seen advertised on TV

General Practitioner Profile:

GPs are now:
- Older (as one GP said "similar to their patients – older, sicker and grumpier")
- Increasingly female (Previously GPs were male with invisible full time domestic support)
- There was a view that male doctors still dominate the workforce and an expectation that others should work like this => tension and this can be a disincentive for female GPs and younger males
- Not wanting to be the “super doc” – some older GPs said that they are no longer prepared to do what they did five years ago – more likely to set limits
- GPs have to make tough decisions about financial matters e.g. no longer bulk billing – a tough decision – the MBS rebate just hasn’t kept pace with costs
- GPs have to be computer savvy – if crashes => "really stuffed"/ medical records have improved dramatically
- Mobile phones have made a great difference for GPs & coverage is getting better
- GPs are likely to want to work fewer hours – “it’s a job not a vocation”
- GPs are less likely to have procedural skills – comment: “Anyone who wants to be a procedural GP is an idiot and should be quietly marched out and shot". Other GPs disagreed.
- GPs are older when they enter the workforce – they have more family commitments & their spouses are more likely to have differentiated careers
- Implications of graduate entry courses – more consumerist in their approach/ less oriented towards loyalty/ enter practice at a different stage in their lives/ want to retire earlier
- GPs have more opportunities to do non clinical work e.g. with Divisions, training consortia, medico legal, training allied health and ambulance professionals – “these activities can be quite refreshing”
• Concept of joining a practice has changed for younger doctors – need to restructure practices to attract new GPs. They are less likely to want equity in a practice/ less likely to want to be partners or associates, more likely to want to be employees
• Higher turnover of GPs than in the past /GPs are more mobile/ want to walk in/ walk out of practices, staying around 5 years
• GPs wish to do less on call and less after hours work
• Changing expectations of newer GPs reflect the societal changes as a whole
• GPs need to manage patients with more complex diagnostic tools, more complex drug regimes – medicine is more complex in just about every way
• GPs are better trained after rural GP training than they were in the past
• Rural GPs and communities can be very conservative; not embrace change
• Not enough locums at the right times
• GPs are retiring earlier – less likely to move to locum or part time work in retirement because of costs of indemnity
• GPs are in demand for work with Divisions, AHS etc
• One significant issue that was raised was the shift in accepting responsibility in rural towns. For example, “if a drunk causes trouble in the pub, the cops are called, but they don’t want to take responsibility so they call the Ambulance officers – they take the drunk to the hospital but the nurses don’t want to take responsibility so they call in the GP who comes up to the hospital and sends the drunk home because he’s drunk not sick. This can be (and has been) the last straw for a doctor. Three nights of this and the locum is out of there (literally).”

Medical students are now:
• Graduating from medicine with a HECS debt of up to $60,000 – this compares with the previous generation – “when you graduated you were about even” – ie no debts but no money either – “you were lucky to have $64 and a v dub”, “Now they just want to get into practice to earn money to pay their HECS debt off”. “This works against rural practice because even though it is cheaper to buy a house and set yourself up in the country, the perception is that you’ll never get back to the city again”.
• More likely to have a spouse who’s been supporting him/ her through medicine and is now on the career path and not likely to want to go “rural” – ie give up his/her career
• Up to 20% of medical students now full fee paying (comes out of existing quota – therefore in effect fewer medical graduates in real terms)

Changing practice structures:
The discussion about the changing practice structures and the effect of this on workforce planning included:
• The move to group practices (economies of scale) => major implications for solo towns and solo practices. There is also a move to ”satellite” practices – with solo and/or part time practices managed from group practices. Solo practices will still exist and will continue to exist in the smaller towns (ie geographic imperatives)
• Many GPs agreed that the ideal size of practices is 4 – 6 GPs
• More after hours collaboration – GPs working more as a team eg in Armidale practices are moving towards shared on call because this is seen as a recruitment draw card for new GPs
• OTDs – coming with different expectations eg if from UK, NZ expect to have practice nurses/ expect to have records going way back (as in NHS)
• Corporatisation has come to Dubbo => made a difference to the practices in town; likely to be more of this in the future
• GPs have had to be come more IT “savvy” and hence often more stressed
• Practice “entities” becoming more attractive – because doctors are not good managers and don’t want to buy into practices or country towns (even buying a house is not attractive to many)
• Smaller towns – council owned premises/ facilities. Local councils need to create the infrastructure for practices. This can be hard for the existing GPs has to be done with great sensitivity. Local councils also have a role in meet and greet, finding spouse employment etc
• A small town option is to have the practice co-located with the MPS or hospital
• Need for childcare arrangements to be included in recruitment and retention strategies
• Credentialling – need for simplified system

GP registrars are now:
• Older and more likely to be in committed relationships and have children
• More of NESB and Asian descent
• Urban centric ”world finishes with the mountains”
• The traditional notion of the rural doc is turned on its head
• Registrars often lack experience, life skills (ie might be older but all they’ve done to date is study)
• Many have little understanding of rural issues and some are on the rural training pathway as a way into general practice
• Fewer want to do procedural medicine
• Increased practice costs – because of IT, OH&S and accreditation requirements, and more paper work eg for Centrelink
• Much, much more paper work
• More time taken up with practice management
• GPs are practising in a much more complex environment and management of patients is more complex
• Practice overheads are greater now than in the past
• Advent of Divisions has been very positive and provides networking opportunities among practices
• Changing roles of GPs towards more preventive ill health, screening, population health = bureaucratic and support structures have developed around this
• The viability of rural practice is decreasing/ being carried by hospital work (increasing percentage of income is from hospital work)
• Part time practice isn’t always worthwhile because of indemnity costs (especially for procedural GPs). This can discriminate against female GPs too.

What is distinctive about rural and remote practice?
The sessions ended with discussions about the differences between workforce planning for rural and remote areas and national planning. This started with the question “what is distinctive about rural practice?” The responses were as follows:

• Differences must be recognized between regional, rural and remote and within regional there are two sorts of GPs – those who do hospital and procedural work and those who don’t. There is also the need to consider distance from a major centre.

• The diversity of rural practice must be recognised – “not one size fits all”.

• In general, rural GPs do much more procedural work. Links with other proceduralists are necessary, for example, GP surgeons with GP anaesthetists. It was also noted that GP anaesthetists assist visiting specialists. In rural areas there is the need for broader range of skills; there’s currently a major deficit in procedural GPs – this will get worse as the older procedural GPs won’t be around to train the new GPs in procedural medicine

• There are fewer sub specialties (a limiting factor in recruitment and conversely the “whole of medicine” practice is an attractive factor)

• Smaller critical mass to plan from => implications for modelling but also for succession planning – a town can tip over very easily

• Higher burden of disease (of rural residents) needs to be factored into workforce planning

• Good will doesn’t mean anything anymore – in the smaller towns someone can come in and squat and get a patient base straight away and even in the larger towns where a new GP would be waiting to build a patient base no one wants to pay for good will

• Relying on HIC data is inappropriate. This data reflects only part of the picture.

• There are no JMOs outside base hospitals and few specialists

• Rural and remote GPs need emergency and resuscitation skills compared with many urban GPs

• Patients taking longer to get appointments – present later => patients need more time each

• Mismatch in future GP workforce (ie GP registrars and OTDs) and current docs because the new recruits (OTDs and registrars) are different from current GPs

• Aboriginal health issues are more prominent in rural and remote areas than in the cities. There’s a view that Aboriginal morbidity rates are getting worse

• Tourist influx and seasonal workers can be issues for planning – needs to be factored into population projections

• There are significant issues round safe hours of working

• Effect of provider number moratorium – impact yet to be seen

• The retention rate among the more recently appointed OTDs and among Rural Training Pathway registrars is uncertain

• In one consultation it was suggested that “the right spouse, the right support” should be added to the definition of medical workforce planning

• It was also agreed that medical workforce planning is only as good as the assumptions and data underpinning it

• Wide variety of skills that are in rural practice – workforce planning needs to look at procedural work – linkage with other proceduralists necessary e.g. GP anaesthetists with other proceduralists / research/ public health/ university teaching (RCSs and UDRH)

• Need to do GP workforce planning in context of other health professionals

• Obviously needs to be linked to service planning

• In rural practice there are ad hoc service integrations (of necessity) compared with in urban practice there may be imposed integrations but as an urban GP you can work quite separately from other services

• Need to broaden health service provision into context of all of rural (i.e. without appropriate health services, communities decline) – economic rationalism destroys rural communities

• Need for sensible arrangements e.g. a town may support 0.6 GP – so put rest of the time into e.g. public health

• Need to get away from fee for service remunerative arrangements/funding models

• need for different practice arrangements e.g. satellite practices/ shared after hours etc
6.3: Value of Community Consultations

The community consultations inform the narrative and context for workforce modelling (Chapter 5). As one GP said “looking just at the data takes the human side from workforce planning.” The models provide a platform (or skeleton) for discussion about workforce planning. The consultations provide the flesh. Models, by definition, are limited by the assumptions upon which they are based and the data that is entered. RDN has good data available in its GP workforce database but not all indicators, (for example, of workforce shortage) can be quantified.

The consultations have provided information and evidence that reinforces the assumptions underpinning the modelling and the directions taken by RDN in workforce planning. This evidence includes:

- The need to factor in that GPs are likely to be working fewer clinical hours per week in the future – hence the need in the future to replace a retiring GP with more than one new GP or the need for new ways of practice.
- The need to recognise the increasing participation of females in the medical workforce.
- The need for good data and care with data e.g. the HIC under represents GP work – one overworked Gunnedah GP said that the HIC defines him as 0.8 FTE. It ignores all his hospital and other work outside Medicare billings. HIC data is also not based on the time of the service but rather on the time of the claim. (There can be delays in claims.)
- The need for local input into workforce planning.

Conversely the consultations have also reinforced the limitations of predictive modelling. These limitations are discussed fully in Chapter 7. Briefly these limitations include:

- How do indemnity issues and the uncertainties around these get factored into workforce planning? Already fewer GPs are choosing to work as locums in their retirement and some females who had been working part time and raising children have withdrawn from the workforce.
- How to weight the plan for procedural GPs? (RDN hopes that the next revision of the plan will do this. Although it is such an obvious and necessary thing to do, no one has yet done this).
- How to predict the attrition rate of Rural Training Pathway registrars (there was a suggestion that if 50% stay in rural practice we are doing well) and even this statement raises the question of how long (to stay) is reasonable?
- Do we aim for self sufficiency in Australia in training GPs or do we recognise that TROTDs are legitimate in certain circumstances?
- How do we factor in global trends in medical workforce planning – will the UK “poach” many of our doctors for example? Conversely do we have a role in exporting Australian graduates to less developed countries?
- How to measure the impact of the increased practice support available from other health professionals? One GP said that his Bathurst practice includes a practice nurse and a half time psychologist working from the practice. This is, he said “a good thing”. He also stated that the time saved for the GP by the practice nurse is the same as the time required to deal with the increasing amount of paper work required of him in the practice. So, having a practice nurse breaks even in terms of GP productivity.
- The issue of independent nurse practitioners was also raised. – “a brilliant idea in the right place at the right time as collaborative members of health care teams”.
- While recognising the differences between workforce planning and service planning, neither can be done in isolation.
6.4: List of Participants in the Community Consultations

**Community Consultation held in Orange on 7th March 2003**
- Dr Louise Baker, Medical Director, NSW Central West Division General Practice
- Mr Gary Brown, Community Services Co-ordinator, Cabonne Shire Council
- Ms Sandra Christensen, CEO, NSW Central West Division General Practice
- Ms Justine Curnow, AMWAC
- Mr Gaven Ellis, Sector Manager, NSW Ambulance
- Mrs Audrey Hardman, Consumer representative, Mandurama
- Mr Trevor Lobb, GM, Weddin Shire Council
- Ms Kirsty McEwin, Director, Medical Workforce Planning, RDN
- Dr Geof Marshall, Director of Emergency, Bathurst Base Hospital
- Dr Andy Mather, Director of Emergency, Orange Base Hospital
- Dr Sandra Mendel, NSW Central West Division General Practice & rural GP
- Cr Wendy Pankhurst, Mayor, Cabonne Shire Council
- Dr Bruce Sanderson, Director of Clinical Services, Mid West AHS
- Ms Anita Smith, Program Manager, Workforce & Aged Care, NSW Central West Division of GP (Cowra)
- Ms Pamela Stuart Brown, CEO, Cent West Consortium
- Ms Melissa Sweet, Medical Writer
- Mr Alan Thompson, GM, Cowra Shire Council
- Ms Anne Tonna, Manager, Mid Western Rural Health Development and Training Unit
- Mr Peter Williams, Database Manager, RDN
- Dr Ross Wilson, GP & Area Health Service GP Liaison

**Community Consultation held in Sydney with the Rural Medical Support Forum on 14th March 2003**
- Ms Mandy Ampt, Researcher, Rural Health Unit, UNSW
- Dr Liz Barrett, Medical Advisor, RDN
- Ms Melinda Bell, Recruitment Officer, Aboriginal Health and Medical Research Council
- Ms Beth Brennan, Workforce Project Officer, RDN
- Dr Ian Cameron, CEO, RDN
- Dr Paul Collett, RDN & Chair of Outback Division of GP
- Ms Justine Curnow, AMWAC
- Dr Grahame Deane, Barwon Division, NSWRDN Board & rural GP, Gunnedah
- Dr Kathryn Hutt, Medical Advisor, Medical Education, Training and Workforce, NSW Health Department
- Dr Jamie McEncroe, Manager, Medical Services, Griffith Base Hospital, Murrumbidgee Division & rural GP
- Ms Kirsty McEwin, Director, Medical Workforce Planning, RDN
- Ms Lisa McFayden, Manager, Overseas Doctors and Locums, RDN
- Ms Janet McLean, Country Women’s Association and Community Representative
- Ms Linda Mere, Executive Officer, General Practice, State Office, DoHA
- Mr Tony Miles, Director of Recruitment and Retention, RDN
- Dr Karen Ramsay, RDA NSW & rural GP, Narrabri
- Dr Bruce Sanderson, Director of Clinical Services, Mid Western Area Health Service
- Dr David Sutherland, Senior Lecturer, Rural Health Unit – School of Community Health, UNSW & remote GP
- Cr Gae Swain, Mayor, Gunnedah Shire Council
- Ms Angela Tittmus, University New South Wales Medical Student
- Ms Sonia Todkill, Project Manager, Student Activities, RDN

**Community Consultation held in Dubbo on 19th March 2003**
- Dr Jenny Beange, CEO, Dubbo Plains Division General Practice and GP
- Ms Jeanine Biviano, CEO, Macquarie Area Health Service
- Mr John Clarke, CEO, Outback Division General Practice
- Ms Justine Curnow, AMWAC
- Ms Janine Dennis, Program Manager, Medical Workforce Planning, Dubbo Plains Division GP
- Dr Janet Dunbabin, Research Officer, RDN
- Dr Bruce Harris, Senior Lecturer, Dubbo Clinical School, University of Sydney
- Mrs Judy Harris, Locum Service Project Officer, RDN
- Ms Kirsty McEwin, Director, Medical Workforce Planning, RDN
- Ms Karen Pearce, Rhedwest Limited
- Ms Sallie Scoggin, Divisional Co-ordinator, RDN
- Mr Peter Williams, Database Manager, RDN
- Dr Robin Williams, Chair, Dubbo Plains Division General Practice
- Ms Trish Young, Workforce Manager, Macquarie Area Health Service
Community Consultation held in Coffs Harbour on 30th March 2003

- Dr Bob Byrne, GP Coleambally & Chair of RDN
- Ms Justine Curnow, AMWAC
- Ms Kate Denney, Project Officer MSOAP & PROTDs, RDN
- Dr Richard Draper, GP, Parkes
- Dr Mark Henschke, GP, Armidale
- Ms Susan Jeckle-Sadlier, AMWAC
- Dr Ian Kamerman, GP, Bingara
- Dr John Kramer, GP, Woolgoolga
- Dr Richard Lamplugh, GP, Bourke
- Ms Kirsty McEwin, Director, Medical Workforce Planning, RDN
- Mr Tony Miles, Director of Recruitment and Retention, RDN
- Dr Chris Mitchell, GP, Lennox Head
- Dr Andrew Moreton, GP, Bourke
- Dr Sue Page, GP, Lennox Head, President RDA NSW, UDRH Lismore
- Dr Zekei Palushi, GP, Coffs Harbour
- Mr Peter Spence, CEO, Mid North Coast Division of General Practice
- Mr Peter Williams, Database Manager, RDN
- Dr Les Woolard, GP, Moree
- Dr Geraldine Duncan, GP Wagga Wagga, Rural Clinical School, UNSW & Coast City Council Consortium
- Ms Sue Edwards, CEO, Riverina Medical & Dental Aboriginal Corporation
- Ms Sharon Flynn, CEO, Coast City Country Consortium
- Dr Marseil Griess, GP, Wagga Wagga
- Ms Jodie Griffin, Program Manager, Workforce, South East Division of GP
- Mrs Heather Kember, Country Women's Association of NSW
- Dr Yusafali KHALFAN, GP, Harden & South East Division of GP
- Ms Tracey Lonergan, Wagga Wagga City Council
- Dr Ken Mackey, GP Lockhart, Chair of Riverina Division of GP and President of RDAA
- Dr Elizabeth Millard, General Practitioner Locum
- Dr John Padgett, GP, Wagga Wagga
- Dr Michael Price, GP and South East Division of General Practice
- Professor Sandy Reid, Director of Rural Health, UNSW
- Ms Joy Ross, Program Manager, Workforce & Aged Care, Riverina Division of GP
- Ms Sue Sutherland, Project Officer, Workforce Planning, Greater Murrurundi AHS

Written submissions were received from Dr Diane Larcombe and other GPs in the Young District Medical Centre and from Ms Julie Redway of the Murrumbidgee Division of General Practice.

Community Consultation held in Wagga Wagga on 3rd May 2003

- Ms Julie Briggs, CEO, RIVROC (Rep. Riverina Local Government)
- Dr Paul Curtis, Director of Clinical Services, Greater Murrurundi Area Health Service
- Mr Brett Dee, AMWAC
- Dr Brian Driver, GP, Wagga Wagga
- Dr Peter Finlayson, Director of Clinical Services, New England Area Health Service
- Dr Guy Fitzgerald, GP, Tamworth
- A. Professor John Fraser, Director, New England Area Rural Training Unit and rural GP
- Dr Steve Howle, Chair, North West Slopes Division General Practice and rural GP
- Mr Graeme Kershaw, Executive Officer, North West Slopes Division General Practice
- Ms Kirsty McEwin, Director, Medical Workforce Planning, RDN
- Ms Fiona Strang, Executive Officer, Barwon Division General Practice
- Dr Leonie Kirkwood, GP, Tamworth
- Dr Stephanie Weidlich, Intern, Tamworth Base Hospital
- Dr Geoff White, GP Manilla

Verbal comments received from Dr Tom Bennett, GP, Glen Innes, Dr Bruce Menzies, GP, Armidale, and from Ms Tanya Norman, CEO, New England Division General Practice

Community Consultation held in Tamworth on 10th May 2003

- Cr Diane Carter, Councillor, Parry Shire Council
- Ms Justine Curnow, AMWAC
- Dr Grahame Deane, Barwon Division of GP, RDN Board and rural GP, Gunnedah
- Ms Karen Edward, Director, Community and Mental Health, New England AHS

Community Consultation held in Broken Hill on 25th July 2003

- Dr Hugh Burke, Director, Population Health, Far West Area Health Service
- Ms Justine Curnow, AMWAC
- Ms Janet Dalby, Barrier Division of GP
- Mr Terry Dwyer, Maari Ma Primary Healthcare Service
- Professor David Lyle, Director, Sydney University Department of Rural Health
- Kirsty McEwin, RDN
- Dr Ros Menzies, GP
- Dr John Rolleston, GP and Chair, Barrier Division of GP
- Ms Sue Selden, Sydney University Department of Rural Health
- Dr Sivagnanam, GP
- Dr Anne Wakatama, Chief Medical Officer, RFDS
Chapter 7: Discussion – Rural and Remote Medical Workforce Planning

7.1: The Projected GP Under Supply in 2012
The General Practice Workforce Plan for Rural and Remote NSW projects the GP workforce requirements for 2012 for RRMA areas 3 -7 in NSW. The projections are estimated using a predictive model that starts from a baseline of the current GP shortage and projects both the estimated future supply of GPs and the estimated demand for their services. By comparing future supply and demand, the model predicts a short fall of GPs in 2012 in the order of between 275 and 410 (see Chapter 5, Table 37). In short, without new interventions to increase the future supply of general practitioners in rural and remote NSW (ie interventions above and beyond those already in place), the current under supply of GPs will be dramatically worse in ten years time. The model estimates that there will be a net increase in the number of rural and remote GPs in 2012, reflecting the success of recruitment and retention strategies introduced in the last decade and assuming that these will continue to be successful, particularly as longer term initiatives take effect. That the workforce shortage will, however, be worse in 2012 is due to the decrease in the average weekly clinical hours worked by GPs and an increased demand for their services as a result of population increases.

7.2: Limitations of the Workforce Planning Model

"There are a number of persistent issues associated with methodology and process. For example, the models of determining workforce supply, need and demand are imperfect and characterised by a number of problems.... Some of these problems include having a tendency to behave as if planning was an isolated function ....There has been a narrow focus on "numbers based" quantitative analysis. (Mable and Marriott 2001, p19)

The planning model is limited in its scope. The inputs are numbers and, as such, assumptions must be quantifiable. The model is the best RDN has been able to develop and is useful as part of a broader discussion. There are limitations. It assumes that the current delivery of health services, in particular GP services, will be structurally similar to the delivery of health services today and that current GP work practices continue. It assumes that average weekly clinical hours worked by GPs will decrease by 2% per annum; that females will continue to increasingly participate in the rural and remote workforce; that the current legislative and registration arrangements for overseas trained doctors (especially the Permanent Resident OTDs) will continue; and that consumers will be demanding GP services at much the same rate as they are now. It assumes that the increases in nurses and allied health professionals working in general practices will be offset by the increases in paper work and non clinical requirements made of GPs.

The plan does not comment on the extent to which the predicted GP shortfall may be alleviated by physician substitution. It does not directly or indirectly, make an assessment of technology changes and how they may impact on the future delivery of general practice services. Although technological change is inevitable and will affect the workforce, assessing the impacts of changes, including new techniques, equipment, and treatments, on the GP workforce is difficult. The impacts may include increasing practitioner productivity, broadening the types and sophistication of procedures and treatments available, expanding the capacity of telemedicine, and/or increasing substitution by allowing other types of health care providers to perform particular services. While often the emerging impacts are identifiable, it is not always possible to quantify the full impact in advance or to estimate the timeframe when the impact will be felt, particularly in terms of the workforce effects. Similarly, the uncertainties around medical indemnity remain difficult to predict and the impact of these on workforce planning are difficult to assess. The longer term effects of global issues are also difficult to assess. A dramatic policy change in one country, for example the active international recruitment of doctors by the UK, will affect other countries. Annual or biannual revisions of the workforce plan will adjust for these changes as their effects become more apparent.

While the predicted shortfall in GP procedural services is considered in Chapter 4, a weighting for procedural general practitioners is not factored into the workforce model. This is the subject of separate research being undertaken by RDN and will be addressed in further revisions of the plan. At a deeper philosophical level, looking at the health disparities between metropolitan and rural NSW, it is difficult to assess to what extent these may be due to lack of access/utilisation. Or to put it as a question- does GP supply affect health outcomes? If so, to what extent and how is it measured?
7.3: Value of Rural and Remote Medical Workforce Planning

The plan provides a platform for addressing the future medical workforce shortage in rural and remote NSW. It does so in three ways:

7.3.1: Nationally

The plan will influence national level planning by informing the AMWAC review on the optimal supply and appropriate distribution of GPs across Australia for the period 2004 to 2014. While RDN has extensive and accurate data on the make up and attributes of the workforce, AMWAC does not have access to this and has indicated its willingness to be informed by RDN’s plan.

The plan will also influence national policy. There are, for example, only a limited number of policy levers and mechanisms to deal with GP workforce under supply. At the national level adjustments can include:

- changing education and training intakes;
- increasing net migration of doctors into Australia;
- forcing doctors to work in areas of under supply through, for example, the geographical restriction of provider numbers.

AMWAC believes that adjustment of GP trainees is the best way to influence supply, hence its recommendation in 2000 to increase the number of GP training positions for 2001. It suggested that this increase continues to be supported by the range of recruitment and retention strategies already in place and by the continuing use of temporary resident overseas trained doctors on short term contracts to fill gaps. More recently, in May 2003, as a result of ongoing pressure from rural doctor groups, the federal government announced that 150 additional GP registrar places will be funded per year, from January 2004. Additionally, an extra 234 publicly funded medical school places will be created each year, from January 2004 – an increase of 16% in total places. These new places will be bonded to areas of workforce shortage.

7.3.2: At the Statewide level

There are also different interventions that can be made at the statewide level. RDN, through its activities and influence, can:

- increase the number of GPs entering rural practice;
- reduce GP workforce loss;
- improve GP workforce productivity;
- improve workforce sustainability;
- assist in the redesign of workforce tasks.

Workforce planning underpins all RDN’s activities. RDN implements the workforce plan through all of the above interventions and, at the local level, through assistance to doctors and communities in “matching” each other. The interface between erudite state wide modelling and local particular needs is facilitated by RDN and Divisions of General Practice and is articulated formally through the Rural Medical Support Forum (RMSF). The RMSF is chaired by the CEO of RDN and has representatives from community groups, health policy makers (NSW and Commonwealth Health), health service organisations (Divisions of General Practice, Aboriginal Health and Medical Research Council, Rural Doctors Association, NSW), individual practitioners and academics (Rural Medical Training Forum). The RMSF provides “ground level” advice to RDN on local issues and needs, and helps RDN determine broad direction and research. At the same time it operates in feeding back to the local level what is being done to meet their needs, and organisational actions in response to those needs.

7.3.3: Innovations (where policy can follow practice)

The third way that the plan provides a platform for addressing the future medical workforce shortage in rural and remote NSW is through highlighting the need for additional strategies over and above those already in place. It suggests the need for innovative recruitment and retention strategies to address the GP workforce under supply, such as:

New Rural and Remote GP Practice Entities

One of the great successes in NSW has been the NSW Rural Doctors Association Settlement Package (see Chapter 3.3), and this, combined with new GP practice entity models, will sustain general practice in areas of the state where the traditional private practice model is not working. The turnover of doctors and practice staff in small practices has worked against sustainability of services in these towns. The key feature of the practice entity model is the development of a “support model” and “management structure” for general practice which allows doctors to work predominantly as clinicians, in a supported and sustainable team approach to service delivery. Doctors’ attention is often diverted from supply of medical services to small business management. Practice entities can allow flexibility to the doctor in the degree of day to day practice management, and fundamentally support the doctors’ role as a clinician rather than a businessperson. The entity, for example, would provide, and retain ownership of, the “tools” necessary to run a practice. This includes furniture, computers, information management systems and patient records. The entity would also rent premises, provide staff and be responsible for consumables including medical supplies, electricity and telephone. This would support the recruitment of both long and short-term doctors working under

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2 This description of a practice entity is from the Outback Division of GP submission to NSW Health, May 2003. NSW Health has provide ‘once off’ funding in 2003 to assist the establishment of practice entities in NSW.
a variety of contractual arrangements while ensuring continuity of the practice itself. Most importantly it will support continuity of practice infrastructure and human resources in the community regardless of the length of tenure of individual medical practitioners, whilst at the same time creating an environment conducive to their longer-term retention. Development of multidisciplinary services through co-location of GPs and other health service providers is also a feature of the entity model.

The practice entity model builds on RDN's experiences of establishing the Rural and Remote Medical Services (RARMS) Company in 2001. RARMS was established against a background of longstanding difficulties in the recruitment and retention of general practitioners to remote communities in the north west of NSW. The financial and other incentives available to prospective doctors were not delivering an adequate and stable medical workforce to communities that had amongst the worst health outcomes in NSW and Australia. Impediments to recruitment were perceived to include lack of suitable housing, inadequate practice infrastructure, unwillingness of prospective doctors to incur capital set-up costs or the hassles of establishment and administration.

RDN perceived the need for a vehicle that would, first and foremost, provide a walk-in/walk-out option for doctors. If RARMS could secure appropriate (rental) housing and medical practice infrastructure, practice staff, and other assistance, it was hoped more doctors could be attracted to the area. With more doctors to share the heavy medical workloads, such locations would be less daunting and more appealing to other prospective doctors.

From the outset, the intention of RARMS was to test new ways of structuring the arrangements for delivering medical services in the hope of being able to attract an adequate supply of appropriately skilled doctors. The RARMS model is currently proving to be very successful in both Lightning Ridge and Walgett. There are now adequate numbers of GPs in both communities, supported by practice nurses, competent practice management, fully computerised clinical and management systems, improved access to allied health services and stable relationships with other service providers/managers including the Area Health Service. RARMS would not have been able to achieve the above outcomes were it not for the availability of grant funding from the Commonwealth Department of Health and Ageing. Other variations of the "walk in/walk out" model support GPs successfully recruited to the neighbouring towns of Brewarina and Collarenebri.

Training Practices

The establishment of model training practices in rural and remote NSW but also, for example, in the RRMA 2 rural fringe areas, is another innovative model. The practices would provide supervised training and education for conditionally registered GPs, for GP registrars and for medical students. Procedural training could be included, as could training for other health professionals and practice management staff. Training practices could be co-located with other health service providers, eg allied health and would have specific academic links and promote vertical and horizontal integration of training and education.

Permanent Resident Overseas Trained Doctors

Permanent Resident Overseas Trained Doctors (PROTDs) are now the major source of new recruits to rural practice in NSW. RDN has been supporting PROTDs in a variety of ways including matching PROTDs with Area of Need practices, providing financial support for site visits and for the fees required to go before the NSW Medical Registration Board. RDN was also successful in obtaining a "once off" grant from NSW Health in 2002 to provide rural observerships for PROTDs. Recently RDN has redirected funds into assisting PROTDs with their clinical upskilling and training needs. To date, strategies to support PROTDs have been ad hoc as RDN has seized funding opportunities as they have presented. RDN is now developing a Strategic Plan, with the purpose of identifying and developing comprehensive and integrated strategies to meet the training needs of PROTDs. The specific needs of doctors at different stages along the registration pathway will be considered.

Integrated Primary Health Care

RDN would like to see integrated workforce planning rather than "silo" planning. This was a strong message from the community consultations (Chapter 6) and is consistent with international trends in workforce planning. This could be developed as part of broader primary health care reform. So, if primary health care is to be seen as the local "provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained relationship with patients, and practising in the context of family and community" then RDN has a clear role in workforce planning for primary health care.

This goes beyond recruitment and retention of individual clinicians (doctors, allied health, nurses, Aboriginal health workers) to being involved in the development of locally based health systems that build on the existing rural ad hoc integration to a formalised structure. An example is the Cambridge Health Alliance in Boston USA which is a partnership between primary care, academia and the public health system. It includes small primary care practices, schools, community hospitals, a nursing home and a municipal health department.

Overall there is a paucity of research on how primary health care could operate in rural areas in a developed country. RDN aims to work with NSW Health and the Commonwealth Department of Health and Ageing towards a small invited international meeting to develop frameworks for primary health care. Because of RDN's experience in developing alternative systems for GPs to work in, these could be expanded to become the platforms for primary health care.

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3 The Department of Health and Ageing has funded RDN to prepare a RARMS Manual so that the experiences and lessons of RARMS can be shared with other communities and organisations wanting to establish practice entities. The Manual will be available in July 2003.

4 1996 US Institute of Medicine definition
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# NSW Rural GP Supply Projections

**Assumptions:**
- **Number of GPs**
  - 2002
  - Females: 385
  - Males: 962
  - Total: 1347

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**Departures**
- **Hospital**
  - 6
  - 2
  - 8
- **Interstate**
  - 5
  - 1
  - 6
- **Leave**
  - 2
  - 2
  - 4
- **Left Rural**
  - 14
  - 3
  - 17
- **Locum**
  - 0
  - 0
  - 1
- **Maternity**
  - 0
  - 3
  - 3
- **Other**
  - 7
  - 4
  - 11
- **Retired**
  - 13
  - 6
  - 19
- **Study**
  - 0
  - 1
  - 1
- **Urban**
  - 3
  - 1
  - 4
- **Total Departures**
  - 51
  - 23
  - 74

**Gain %**
- 1.66%
- 3.38%
- 2.15%

**Gender**
- 2002 Avg hrs/wk
  - Male: 52.7
  - Female: 31.2
  - Overall: 46.6

**Scenario 1: Arrivals and departures at same rate as 2002**

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**Reduce hours by**
- 2.00%

**Change this to alter the FTE values**
- AMWAC Average Full time: 54 hours per week
- ABS Full time: 35 hours per week
### Scenario 2: Reduce Male GP Hours

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## Scenario 3: Reduce Hours for all GPs

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| 2002 NSW FWE | 1347 | 1348 | 1350 | 1352 | 1353 | 1355 | 1357 | 1359 | 1361 | 1363 | 1365 |
| ABS FWE | 1793 | 1795 | 1797 | 1800 | 1802 | 1804 | 1807 | 1809 | 1812 | 1815 | 1818 |
| AMWAC FWE | 1162 | 1164 | 1165 | 1166 | 1168 | 1169 | 1171 | 1173 | 1175 | 1176 | 1178 |

| Population per GP / NSW 2002 FWE | 1217 | 1197 | 1176 | 1156 | 1135 | 1115 | 1094 | 1074 | 1054 | 1034 | 1014 |
| Population per NSW 2002 FWE | 1217 | 1221 | 1225 | 1228 | 1231 | 1233 | 1235 | 1237 | 1239 | 1240 | 1241 |
| Population per ABS FWE | 914 | 917 | 920 | 922 | 924 | 926 | 928 | 929 | 930 | 931 | 932 |
| Population per AMWAC FWE | 1411 | 1415 | 1419 | 1423 | 1426 | 1429 | 1431 | 1434 | 1435 | 1437 | 1438 |

### Summary:

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