Solutions for the Provision of Primary Care to Rural and Remote Communities in Queensland

Queensland Rural Medical Support Agency

March 2004
ACKNOWLEDGEMENTS

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<tr>
<td>AAPM</td>
<td>Australian Association of Practice Managers</td>
</tr>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>ACCHS</td>
<td>Aboriginal Community Controlled Health Service</td>
</tr>
<tr>
<td>ACRRM</td>
<td>Australian College of Rural and Remote Medicine</td>
</tr>
<tr>
<td>AGPAL</td>
<td>Australian General Practice Accreditation Ltd</td>
</tr>
<tr>
<td>AIHW</td>
<td>Australian Institute of Health and Welfare</td>
</tr>
<tr>
<td>AMC</td>
<td>Australian Medical Council</td>
</tr>
<tr>
<td>AMWAC</td>
<td>Australian Medical Workforce Advisory Committee</td>
</tr>
<tr>
<td>ARRWAG</td>
<td>Australian Rural and Remote Workforce Agencies Group</td>
</tr>
<tr>
<td>CME</td>
<td>Continuing Medical Education</td>
</tr>
<tr>
<td>DPI</td>
<td>Department of Primary Industries</td>
</tr>
<tr>
<td>EN</td>
<td>Enrolled Nurse</td>
</tr>
<tr>
<td>FRACGP</td>
<td>Fellow Royal Australian College of General Practice</td>
</tr>
<tr>
<td>FTE</td>
<td>Fulltime Equivalent</td>
</tr>
<tr>
<td>FWE</td>
<td>Fulltime Workload Equivalent</td>
</tr>
<tr>
<td>HECS</td>
<td>Higher Education Contribution Scheme</td>
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<td>HACC</td>
<td>Home and Community Care</td>
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<td>HIC</td>
<td>Health Insurance Commission</td>
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<tr>
<td>ICPA</td>
<td>Isolated Children’s Parents Association</td>
</tr>
<tr>
<td>IHW</td>
<td>Indigenous Health Worker</td>
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<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>GPA</td>
<td>General Practice Australia</td>
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<td>General Practice Education Australia</td>
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<tr>
<td>ITIM</td>
<td>Information Technology/Information Management</td>
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<tr>
<td>JHO/JMO</td>
<td>Junior House/Medical Officer</td>
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<tr>
<td>MEO</td>
<td>Medical Education Officer</td>
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<tr>
<td>MORPP</td>
<td>Medical Officer with Right to Private Practice</td>
</tr>
<tr>
<td>MSRPP</td>
<td>Medical Superintendent with Right to Private Practice</td>
</tr>
<tr>
<td>OATSIH</td>
<td>Office of Aboriginal and Torres Strait Islander Health</td>
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<tr>
<td>OTD</td>
<td>Overseas Trained Doctor</td>
</tr>
<tr>
<td>PBS</td>
<td>Pharmaceutical Benefits Scheme</td>
</tr>
<tr>
<td>PGY1/2</td>
<td>Postgraduate Year 1 or 2</td>
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<tr>
<td>PIP</td>
<td>Practice Incentive Program</td>
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<td>QAS</td>
<td>Queensland Ambulance Service</td>
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<td>Queensland Rural Medical Support Agency</td>
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<tr>
<td>RACGP</td>
<td>Royal Australian College of General Practice</td>
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<tr>
<td>RAN</td>
<td>Remote Area Nurse</td>
</tr>
<tr>
<td>RDAA</td>
<td>Rural Doctors Association of Australia</td>
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<tr>
<td>RFDS</td>
<td>Royal Flying Doctor Service</td>
</tr>
<tr>
<td>RN</td>
<td>Registered Nurse</td>
</tr>
<tr>
<td>RRMA</td>
<td>Rural, Remote and Metropolitan Areas</td>
</tr>
<tr>
<td>RWA</td>
<td>Rural Workforce Agency</td>
</tr>
<tr>
<td>SWPE</td>
<td>Standardised Whole Patient Equivalent</td>
</tr>
<tr>
<td>TRD</td>
<td>Temporary Resident Doctor</td>
</tr>
<tr>
<td>UDRH</td>
<td>University Department of Rural Health</td>
</tr>
<tr>
<td>VMO</td>
<td>Visiting Medical Officer</td>
</tr>
<tr>
<td>VR</td>
<td>Vocational Registration</td>
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</tbody>
</table>
EXECUTIVE SUMMARY

The Queensland Rural Medical Support Agency is a state-based Rural Workforce Agency funded by the Commonwealth government to support the provision and retention of adequate numbers of high quality, highly skilled health professionals in rural and remote Queensland. Queensland, like other Australian states and countries including Canada, United States of America, South Africa, New Zealand and the United Kingdom, experience great difficulty in recruiting and retaining doctors to work in rural and remote areas.

This policy paper has been developed to underpin the strategic direction of the Queensland Rural Medical Support Agency to support the development of medical workforce solutions in order to deliver sustainable primary care based on the principles of equity, accessibility and quality to meet the needs of rural and remote communities.

The key objectives of this policy paper are to:

• Identify the historical and current factors resulting in the rural medical workforce shortage, and scope the impact of the shortage on community well-being and service provision
• Review workforce recruitment and retention strategies employed by the medical and other professions
• Review current models of primary care service provision in Queensland and other states
• Appraise current models of primary care and identify strategies to improve sustainable service delivery using information gathered from the literature and industry scoping
• Develop principles for sustainable primary care to underpin the development of models to support sustainable health service delivery in rural and remote areas

For the purpose of this document, discussion has focused on workforce issues impacting on State Local Government Areas RRMA 4 to 7 in Queensland as classified by the Rural Remote Metropolitan Areas indices developed by the Department of Primary Industries and Energy, and Dept of Human Services and Health (1994).

The methodology employed to develop the paper included:

• An extensive literature review
• Industry scoping including interviews with doctors contracted under the 5 year program (known as “Docs for the Bush” in Queensland), compilation and analysis of current models of primary medical care workshoped with key stakeholders
• Synthesis of information to develop principles for sustainable primary care and new models of service delivery

SCOPING THE PROBLEM

The literature review undertaken in this study indicates that the trigger for the rural crisis was a result of the convergence of federal government policies in the early 1990s that sought to address the oversupply of general practitioners in metropolitan areas through restricting medical student intake, reducing GP training places, applying provider number restrictions to overseas trained doctors, and limiting the issue of provider numbers to doctors participating in or completed a vocational training program. Whilst some of these measures sought to promote uptake of rural practice by overseas trained doctors, and there has been a net increase in doctors working in rural areas by 11%, it appears to have created a fragile system with high mobility of doctors.

The current factors contributing to the rural medical workforce shortage, are largely social and demographic i.e., changing gender balance with increased number of women entering the medical workforce, ageing general practice workforce, and changing work patterns of younger doctors seeking to work shorter hours, continue to exacerbate the shortage. Current government policies to increase the number of medical student places may not result in a proportional increase in services provided when consideration is given to recent HIC data that shows that in Queensland 58% of urban general practitioners work less than 0.5 fulltime workload equivalent. [Comparable rural data shows that 68% of doctors billing HIC work less than 0.5 fulltime workload equivalent but this data is confounded by

...
locums and rural relievers providing short-term relief in rural areas).

The impact of the rural and remote medical workforce shortage is seen at many levels. It affects the viability of rural communities, the health status of communities, continuity of patient care, viability of the doctor, placement of doctors with little orientation to the environment they are working in, quality of care, training and supervision of junior doctors, reduction in access to procedural services, viability of a health service and access to other health professionals.

Evidence that undergraduate rural training, postgraduate training and medical school entry criteria favouring rural students is associated with an increased likelihood of being a rural GP underpins recent university policies for preferential selection of students with a rural background as part of a long-term strategy to address the rural medical workforce shortage. However, this is obviously only part of the solution as there continues to be a need to re-think service delivery models that address the factors of why doctors leave rural practice i.e., heavy workload and on-call commitments, professional isolation, lack of professional development opportunities, and lack of locum relief. Family factors i.e., opportunities for spouse employment and children’s education, and community resource factors are significant contributors to poor retention indicating that in addition to revised service delivery models community development action is also required.

Medicine is not the only health profession experiencing difficulties recruiting and retaining a workforce in rural and remote areas. Nursing, allied health and ambulance services experience similar issues. Currently Queensland Health is seeking to restructure service delivery with emphasis on regionalization of acute services particularly for secondary and tertiary care, with an emphasis on primary health care in smaller communities. The drivers behind this restructuring is the increasing technology and treatments that can be made available in tertiary areas, and shorter lengths of stay; a greater focus on chronic disease prevention and management; sustainable service delivery underpinned by quality, safety, access, efficiency and effectiveness workforce supply; and ageing population. The driver that appears to be missing is equity. A risk with the current Queensland Health Northern Zone Clinical Services Planning Framework is that the proposed mix of services available in rural and remote areas is based on population of the catchment areas and not on community need i.e., morbidity, geographical isolation. Whilst it is recognized that the current models in rural and remote areas continue to focus around hospital based services which have low occupancy but high running costs, there needs to be greater consideration to benchmarks for minimum services that promote equity for people living in rural and remote communities, and also reduce the risk of further rural decline.

In addition to regionalization, two other issues are emerging that will have ramifications on the supply and retention of rural doctors. The rise in professional indemnity premiums and increased litigation is impacting on the entire medical profession in Australia. In rural areas the impact is heightened through older doctors choosing to retire rather than continue practice, general practitioners ceasing procedural work and reduction in the complexity of rural based surgical services by visiting surgeons. These reactions to the increased uncertainty of the medico-legal environment not only reduce access to general practice and procedural services in rural areas, but may also trigger the relocation of GPs to larger towns if they can no longer undertake procedural work.

If Australia follows the same route as the European Union (the European Working Time Directive), there will be a reduction in the hours that doctors will be allowed to work, with lack of compliance impacting on indemnity for doctors. Agencies employing doctors and nurses e.g., state health departments in Australia, must consider the safer working hours directives and implications on the rostering of Remote Area Nurses and solo Medical Officers in rural and remote communities. Clearly compliance with these directives would require changes to current models of service delivery in rural and remote Queensland. Furthermore, Australia continues to rely on importing doctors to meet service requirements in rural and remote areas,
and will be impelled to consider such work time directives in order to compete with other countries that offer safer and more lifestyle friendly working conditions.

**Models to Enhance Sustainable Primary Care**

The scoping exercise demonstrates the complexity of issues that have contributed to the current shortage of doctors in rural and remote Australia. To assist in the development of models to enhance sustainable primary care, a planning matrix was developed to identify the core components required to support the professional and personal/community factors in existing or new models of service delivery.

The key areas considered in modelling were recruitment, employment conditions, practice viability and support, relief and peer support, continuing professional development and training, and specialist and other health professional support. The y-axis of the matrix sets out the 'level' at which the components of the models should be addressed i.e., national, state, regional or community.

This project has identified adaptations to existing models of rural medical service delivery that would improve the sustainability of medical practice. These adaptations have particularly focused around practice management, after hours, and mechanisms to increase the critical mass of doctors to continue to provide a range of procedural and primary care services. The adaptations have sought to address identified factors contributing to poor recruitment and retention, and sustainable practice i.e., unwillingness of younger doctors to buy into practices, reduced burden of managing practices, continuity of a practice during periods of doctor turnover; after hours burden, and maintaining opportunities for procedural medicine. The implementation of these adaptations requires removing the artificial barriers between state and commonwealth funded services e.g., allowing for integrated after hours rosters between private general practitioners and hospital doctors, a further review of Medicare rebates to promote greater use of practice nurses for work that will reduce general practitioner workload and increase capacity to manage acute and serious presentations.

The reality facing rural communities and those organizations seeking to support rural and remote health service delivery is that new models are required that make better use of existing resources i.e., human, financial and infrastructure. Clearly it is the residents of rural and remote communities who are affected by changes in the mix of services and mechanisms of service delivery. It is also the communities that are being increasingly called upon to support state and commonwealth initiatives to support health service delivery through provision of local infrastructure. Therefore, communities must be central to and supported in decision-making regarding health service provision.

New models are described that are underpinned by the concept of primary care teams, community input into governance and management of services, flexible training pathways, provision of services across geographical clusters, more efficient use of existing health professionals working across the hospital and community interface, new health professional disciplines i.e., physician assistant, and blurring of state and commonwealth funding boundaries to promote more efficient and sustainable models of care.

This study has demonstrated that one model will not fit all. Perhaps that is one of the contributing factors to why Queensland and other states continue to face ongoing problems in health service delivery in rural and remote areas. Health service delivery in rural and remote Australia is constrained by the contractual agreements between the Commonwealth and States leading to inflexibilities that do not easily allow local solutions to local problems.
CHAPTER 1: INTRODUCTION

Queensland, like other Australian states and countries including Canada, United States of America, South Africa, New Zealand and the United Kingdom, experience great difficulty in recruiting and retaining doctors to work in rural and remote areas.

The purpose of this project was to develop a policy paper for use by the Queensland Rural Medical Support Agency (QRMSA) to underpin its strategic direction in workforce planning over the next 10 years, to develop medical workforce solutions for rural and remote Queensland in order to deliver sustainable primary care based on equity, accessibility and quality to meet the needs of communities.

The QRMSA is one of seven state-based Rural Workforce Agencies (RWAs) in Australia, funded through the Commonwealth Department of Health and Ageing to support the provision and retention of adequate numbers of high quality, highly skilled health professionals in rural and remote Queensland.

The key objectives of this project were to:

• Identify the historical and current factors resulting in the rural medical workforce shortage, and scope the impact of the shortage on community well-being and service provision
• Review workforce recruitment and retention strategies and those employed by the medical and other professions
• Review current models of primary care service provision in Queensland and other states
• Appraise current models of primary care and identify strategies to improve sustainable service delivery using information gathered from the literature
• Develop principles for sustainable primary care to underpin the development of models to support sustainable health service delivery in rural and remote areas

For the purpose of this document, discussion has focused on workforce issues impacting on State Local Government Areas RRMA 4 to 7 in Queensland as classified by the Rural Remote Metropolitan Areas indices developed by the Department of Primary Industries and Energy, and Dept of Human Services and Health (1994).

The methodology employed to develop the paper included:

• An extensive literature review
• Industry scoping including interviews with doctors contracted under “Docs for the Bush” program, compilation and analysis of current models of primary medical care worked with key stakeholders
• Synthesis of information to develop principles for sustainable primary care and new models of service delivery

CHAPTER 2: SCOPING THE PROBLEM

This section seeks to scope the issues associated with the shortage of general practitioners and primary care doctors in Queensland. A brief snapshot of the Queensland primary care medical workforce at May 2003, showed that there was a theoretical deficit of approximately 74 practitioners1 in rural and remote Queensland (RRMA 4 – 7), high mobility of practitioners (eg. 192 arrivals, 154 departures over 6 month period December 2002-May 2003), and 18% of practitioners were temporary resident doctors2 recruited to partially meet workforce shortages.

In order to develop solutions to the rural medical workforce shortage, it is necessary to have a clear understanding of the:

• Historical factors contributing to the undersupply
• Current contributing factors
• How the problem of undersupply of rural doctors manifests
• The attractors and detractors to rural practice and triggers for doctors leaving rural communities
• The impending or future “shocks” that must be considered and managed in the development of solutions

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1 The deficit is a theoretic deficit based on implied doctor to population ratio of 1:1012 as suggested by AMWAC in their 2000 analysis of supply and requirements. The theoretical deficit was based on the 893 practitioners in RRMA 4-7 as at 30th November 2002. Currently only approx 10 vacancies on QRMSA website and some of the practices are very specific in the type of doctor they want. In reality, is there a deficit or rather a lack of experienced and stable medical workforce?

2 Queensland Rural Medical Support Agency (2003). Queensland Rural and Medical Workforce Analysis. Brisbane: QRMSA.
2.1. HISTORICAL FACTORS CONTRIBUTING TO WORKFORCE SHORTFALL

Until the late 1980’s the size, structure and distribution of the medical workforce was largely unregulated by the Australian governments. However, in the late 1980s attention began to focus on the size and distribution of the medical workforce as medical services expenditure increased rapidly i.e., real growth in per capita health and medical expenditure outstripped per capita GDP growth. Furthermore, there was no correction of the geographic and sectoral undersupply of practitioners, with an oversupply of practitioners in capital cities, undersupply in rural and remote areas, and a shortage of practitioners providing services to indigenous people.3

Recruitment of doctors to rural areas has historically been difficult. However, the spotlight fell on this problem in the early 1990s with the emergence of the Rural Doctors Association of Australia and the formation of Divisions of General Practice which identified communities having difficulty recruiting and retaining doctors, and quantified the doctor to patient ratios existing in rural areas.

The initial report of the Australian Medical Workforce Advisory Committee in 1996 contended that the general practitioner workforce was in considerable oversupply in the capital cities and other major urban areas of Australia, and significant undersupply in rural and remote areas. The urban oversupply was estimated at 4,400 (2,900 FTE) and rural undersupply at around 500 (445FTE).

The initial report of the Australian Medical Workforce Advisory Committee in 1996 contended that the general practitioner workforce was in considerable oversupply in the capital cities and other major urban areas of Australia, and significant undersupply in rural and remote areas. The urban oversupply was estimated at 4,400 (2,900 FTE) and rural undersupply at around 500 (445 FTE).

In the mid 1990s the federal government instigated a number of measures to slow the growth in the overall size of the medical workforce, affect structure and geographical distribution of the workforce. These measures included:4

- **Restricting the number of Australian medical students, capping intake in 1996.**
  The number of medical graduates has remained static over the period 1991-2000.5

- **Reduction in number of GP training places.**
  In 1995 the Federal Labour government cut GP training places from approximately 800 to 400.6 This effectively reduced the number of GP registrars in training by 533 over a four year period i.e., 1,881 GP registrars in 1995 to 1,348 GP registrars in July 1999, and hence supply of Australian trained GPs.

- **Immigration restrictions.** Restricting the eligibility of overseas trained doctors (OTDs) to migrate to Australia on a permanent or temporary basis; establishing as a requirement that all OTDs were required to sit the Australian Medical Council (AMC) exam (including those from UK, Ireland, South Africa and Canada who had previously been automatically recognised); establishing a quota of 200 OTDs permitted to attempt the clinical component of the AMC exam each year (however quota abolished 1995); medical practitioners receiving negative points for preferred skills weighting system.

- **Provider number restrictions for OTDs.**
  Effective from 1996 and 1997, changes to the Health Insurance Act 1973, limited access to Medicare rebates by OTDs, where Temporary Resident Doctors (TRDs) could only access provider numbers if they worked in ‘districts of workforce shortage’, and OTDs entering Australia on a permanent basis (and not registered in Australia before January 1 1997) were ineligible

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2 Ibid. p 68-69, 88.
4 General Practice Education and Training. (2003). Submission to Senate Select Committee on Medicare.
for a provider number for 10 years unless they worked in a ‘district of workforce shortage’.

- **Vocational registration** – From 1st November 1996, the Commonwealth government limited the issue of provider numbers to doctors who were recognised as medical practitioners, or were on a recognised postgraduate training program, or fully qualified as a specialist. This measure arose from the growing recognition that general practice is a distinct medical discipline requiring a specific skill set. Prior to the 1970s there was no formal training for general practice. Training programs began to be developed and were introduced in the 1980s but were not compulsory, with medical graduates able to enter private general practice with as little as a year of undifferentiated hospital intern experience.

Whilst the introduction of vocational registration has negatively impacted on the supply of general practitioners, it has promoted the attainment of specific skill set for general practice medicine.

These measures have limited the supply of medical practitioners in Australia, and had some impact on the distribution of the medical workforce in rural and remote areas with the number of doctors working in these areas increasing by 11%. However there continues to be a mal-distribution of the medical workforce and workforce shortages, concurrent with a high turnover of doctors in rural and remote Queensland and other states.

### 2.2 Current factors contributing to the workforce shortage in rural and remote areas

There have been a number of studies and reviews identifying factors that contribute to the ongoing shortage of primary care doctors in rural and remote areas, as well as regional areas. The most notable supply side factors are the ageing of the workforce, changes in participation (measured by hours worked per week) and the increase in female participation. Other factors are emerging that have an “upstream” impact on choosing general practice as a career including poor image of general practice and rural practice, consideration for the needs of spouse and family, satisfaction with vocational training, and changing attitudes to owning a practice.

#### 2.2.1 Ageing workforce

Over the last 15 years, age profile trends show that the general practice workforce (inclusive of metropolitan, large rural, other rural and remote) is ageing, and that older doctors are carrying a higher proportion of the workload. In the 15 years between 1985/86 and 1999/2000, the proportion of GPs over 50 years has risen from 28% to 36.9%, and the workload carried by these GPs has increased from 29.5% of GP Fulltime Workload Equivalents to 40.6% of Fulltime Workload Equivalents. The AMWAC report draws the conclusion that as older GPs retire they are replaced by GPs who prefer lighter clinical workloads and are increasingly female (therefore more likely to be working part time).

The relationship between changing work patterns and age is supported by recent data QRMSA purchased from Hicstats which shows over a 12 month period (April 2002–March 2003), at a national level 64.5% of fulltime workload equivalents are contributed by GPs over 45 years. However, the age distribution of clinicians indicates that nationally the age group with

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8 Lennon B. (2003). The overlapping roles of primary care physicians, general specialists and sub-specialists: an Australian perspective. 7th International Medical Workforce Conference, Sept. 11-14, Oxford, UK.


11 A (FWE) value is calculated for each doctor by dividing the doctor’s Medicare billing (Schedule fee value of claims processed by the HIC during the reference period) by the mean billing of full-time doctors for reference period. For the 2001-2002 reference period, this value was $203,857. As opposed to a Full-time Equivalent (FTE) which is used to assign a practitioner as casual, part-time or full-time, the FWE can be fractional and exceed a value of 1 (e.g., HIC billings of $306,000 would derive a FWE value of approx 1.5 while HIC billings of $153,000 would derive a FWE value of 0.75. These values are adjusted annually and are sometimes recalculated in retrospect by the Department of Health and Ageing (DoHA).
the highest number of clinicians is 35-44 years.\(^{12}\) In Queensland for the same period 59% of services billed to the HIC were provided by doctors over 45 years (Figure 1), and they comprised 52% of Queensland general practice workforce.

In Queensland in RRMA 4-7 the average age for male GPs is 45.61 years and 40.86 years for females.\(^{13}\) In the four rural Divisions of General Practice in Queensland (Central West Qld Rural and Northern Qld Rural have amalgamated) 42.7% of GPs are aged over 45 years (Table 1). Interestingly in these Divisions the workload carried by the doctors over 45 years (42.7%) is less than the state average (53%).\(^{14}\) and this may be attributed to the high proportion of TRDs working in the rural and remote areas in Queensland [see Table 4B], who are younger in compliance with immigration requirements i.e., currently required to less than 45 years old.

Over 14% of doctors in Queensland RRMA 4-7 are 55 years or older (Table 1). Current factors such as the rising medical indemnity insurance premiums may result in an earlier exit of these doctors from the workforce.\(^{15}\) Therefore over the next 5 years there could be an exodus of doctors from rural and remote Queensland in excess of 120 doctors based on QRMSA data (Table 1).

**FIGURE 1. PERCENT OF FULLTIME WORKLOAD EQUIVALENT BY GENDER AND AGE CATEGORY**

Percent of FWE by Gender and Age Category (Qld - Apr02 to Mar03) - Total FWE 3261; N=4598


\(^{13}\) Queensland Rural Medical Support Agency. (2003). Analysis of the Queensland Rural and Medical Workforce. Brisbane: QRMSA.


\(^{15}\) Qualitative comments made by doctors completing the annual minimum data set survey, QRMSA Minimum Data Set, November 2003.


TABLE 1. AGE DISTRIBUTION OF PRIMARY CARE DOCTORS, QUEENSLAND RRMA 4-7

<table>
<thead>
<tr>
<th>Age group</th>
<th>No. doctors</th>
<th>Percent</th>
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<tr>
<td>25-29</td>
<td>67</td>
<td>7.8</td>
</tr>
<tr>
<td>30-34</td>
<td>107</td>
<td>12.5</td>
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<td>35-39</td>
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<td>45-49</td>
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<td>50-54</td>
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<td>55-59</td>
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<tr>
<td>60-64</td>
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<tr>
<td>65-69</td>
<td>12</td>
<td>1.4</td>
</tr>
<tr>
<td>70 plus</td>
<td>18</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>857</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Age data was not available for all rural practitioners.

2.2.2 INCREASED PARTICIPATION OF WOMEN IN THE GENERAL PRACTICE WORKFORCE

The number of women entering medicine is increasing with more than half the intake being female. In 1998, women represented 32.3% of the GP total workforce, with 53.5% aged 25-34 years and 42.1% aged 35-44 years, in comparison to 1984–85 when women comprised only 22.7% of the GP workforce. In 1998, 57.8% of GP trainees were women, and a continuation of this pattern will lead to a relatively rapid rise in the proportion of female GPs over the next decade.

Whilst women are choosing general practice as it provides greater flexibility to meet family/social and professional objectives, they are providing fewer services due to part-time work and temporary absence for family reasons. This is evidenced by the lower proportion of fulltime workload carried by women (Fig 2). In Queensland during the 12-month period April 2002 to March 2003, 36% of GPs billing HIC were female, however, they carried only 25.7% of the fulltime equivalent workload.

The Australian Rural and Remote Workforce Agencies Group reported that at May 2003 28.6% of GPs in RRMA 4-7 were female. Analysis of Queensland data (RRMA 4-7) shows that 29.2% (272/ 931) of rural primary care doctors were female, fairly close to the overall national figure. However, younger women were under-represented in rural general practice. The Queensland data shows that of the female rural doctors 27.3% (69) were under 35 years, compared with 38.4% under 35 years nationally.

2.2.3 CHANGES IN PARTICIPATION

Changes in work patterns are emerging, with younger doctors seeking to work shorter hours to have time for family, social and recreational activities. A recent AMWAC medical careers survey identified that across training programs, 42.8% of doctors in vocational training programs are dissatisfied/very dissatisfied with time for family, social and recreational activities, while 34.1% were satisfied. Interesting 50.6% of trainees in the GPEA/GPET program were satisfied with time for family and social interactions, which reflects some of the factors that influenced their choice of discipline i.e., appraisal of own domestic circumstances, opportunity to work flexible hours and number of years required to complete training. At a national level, geographic differences exist in work patterns. Practitioners working in rural and remote areas work longer hours than their metropolitan

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colleagues (51.1 v 48 h/week respectively). In rural and remote areas the proportion of doctors working > 65 hours/week was 20.4% and 19.8% respectively, compared to 14.8% of doctors in metropolitan areas. Average hours on-call also increased proportionally with distance from capital cities. Long working hours and heavy after-hours on-call commitments are seen as detractors to rural practice, and is one of the factors that impact on career choice.

In an attempt to further explore the Queensland medical workforce the Queensland Rural Medical Support Agency compared fulltime workload equivalent (FWE) contributions across a selection of rural and urban Divisions of General Practice. To this end, data for 5 rural divisions; Southern Queensland Rural, Central Queensland Rural, Far North Queensland Rural, Northern Queensland Rural and Central West Queensland Rural were combined for analysis (Note: North Queensland Rural and Central West Queensland Rural divisions have now combined as North and West Queensland Primary Health Care). Similarly, data for six urban divisions (Bayside, Brisbane Inner South, Brisbane North, Brisbane Southside Central, Logan and Redcliffe-Caboolture) were combined.

**Figure 2. Proportion of Fulltime Workload Equivalent provided by % Headcount**

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The data shown in Figure 3 indicates that rural male practitioners tend to carry a higher workload compared with their urban counterparts up until the age of 55 where their contribution tends to drop below that of urban males. For females, the contribution of rural female practitioners is higher in under 35 category but then tends to fall below that of their urban female counterparts.

Figure 4 displays the proportion of FWE provided by both males and females and the percentage of the total number of providers they comprise. Again this data is presented for both the combined rural and urban divisions.

The table indicates that for rural divisions, 14.68% of the male practitioners are providing in excess of 1 FWE and are carrying 50.58% of the rural workload. Similarly, for urban divisions, 15.72% of male practitioners are providing in excess of 1 FWE and carry 42.37% of the urban workload.

Perhaps of greater concern is the relatively large number of male practitioners providing less than 0.5 of a FWE. For rural areas, they comprise 42.66% of total providers and 30.45% in urban areas. The large number in rural areas could be explained in part by the use of Queensland Health relievers who provide locum relief for MSRPP and MORPP doctors together with a substantial use of locums provided by agencies such as QRMSA.

Again, when we look at female practitioners, 27.44% of urban practitioners are providing less than 0.5 of a FWE. For rural female practitioners 26.47% are providing less than 0.5 of a FWE. While it is acknowledged that females tend to carry the majority of family and child raising responsibilities and that there is a growing interest in work hour flexibility, the large number of practitioners (both male and female) working essentially on a part-time basis suggests that there is a potential workforce that could be more...
effectively utilised should practice structures and conditions be made more flexible.

Strategies to increase the number of doctors in the workforce and providing services across the geographical continuum must consider the changing work patterns that are now evident. Obviously benchmarks that use ratios such as GP: population under estimate the number of doctors required as 70% of doctors are not working to potential capacity. What strategies can be developed to tap into this existing capacity? Conversely, if doctors are choosing to exercise the option of providing fewer services to fit with their lifestyle choices, then consideration must be given to increasing the number of GP places in training, or identifying what factors must be addressed to support increased participation.

2.2.4 LIFESTYLE FACTORS
Lifestyle factors appear to strongly influence general practice trainees in their choice of discipline. GP trainees identified ‘interest in helping people’, ‘appraisal of own domestic circumstances’, ‘opportunity to work flexible hours’, ‘experience of specialty as a medical student’ and ‘number of years to complete training’ as the factors impacting on their choice of discipline.24 How well do these lifestyle aspirations match to rural practice as it currently exists?

The AMWAC Medical Careers Survey 2002 identified a range of factors that would influence vocational trainee doctors taking up rural practice. Spouse and family considerations and available jobs for partners were the second and third most frequently mentioned factors by 25% of respondents after monetary incentives. These factors are increasingly important with the establishment of the graduate medical program where medical students are more likely to already be married/partnered and have older children, and less likely to have the flexibility to take up rural practice for a period of time if it is not their long term plan.

Therefore, the current paradigm of rural general practice being an environment where the doctor works long hours, has heavy after hours on-call commitment, has difficulty accessing locums, and resides in communities that have limited social, employment and educational opportunities does not fit with the lifestyle aspirations of the current trainee cohort.

2.2.5 Changing attitudes to owning and managing a general practice

Changing work patterns are also likely to impact on the desire of doctors to own and manage their own practice. The AMWAC Medical Careers Survey 2002 found that about one third of GPEA/GPET vocational trainees intended working less than 35 hours/week, and a further 21% wishing to work under 40 hours. Whilst the long-term (5-10 years) career plans of 73% of doctors in GP training is to be working in a private clinical practice, it is unlikely that the majority of these doctors are intending to own a practice given their desire to work less than full time.

Anecdotal evidence would indicate that fewer younger doctors are seeking to own or buy their own practice. In rural towns and regional cities in Queensland, there has been numerous instances of doctors closing their practice because they have been unable to sell it.

In rural Queensland, Queensland Health contracts doctors as Medical Superintendents with Right to Private Practice, with a retainer package including a clinic (variable quality), house and car. Private general practice has difficulty competing with this.

2.2.6 Poor image of general practice/poor image of rural practice

The National Marketing and Communications Plan developed for the Australian Rural and Remote Workforce Agencies Group by McDonnell-Phillips Pty Ltd, July 2003, raised the issue of the declining desire amongst medical students to become a GP based on themes developed during the consultation process for the marketing project and past research. Whilst, McDonnell-Phillips did not provide references to support this, RACGP and GPEA commissioned reports showed a decline in the number of applicants to the general practice training program, and ratio of applicants to general practice training places since 2001, at a time when the number of training positions were increasing.

### Table 2. Application to General Practice Training Program (1998 – 2004)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Applicants</th>
<th>Number of Training Places</th>
<th>Applicants/Training Places</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>729</td>
<td>400</td>
<td>1.82</td>
</tr>
<tr>
<td>1999</td>
<td>695</td>
<td>400</td>
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<td>2002</td>
<td>661</td>
<td>450</td>
<td>1.47</td>
</tr>
<tr>
<td>2003</td>
<td>604</td>
<td>450</td>
<td>1.34</td>
</tr>
<tr>
<td>2004</td>
<td>661</td>
<td>600</td>
<td>1.10</td>
</tr>
</tbody>
</table>

It is important to understand at what point medical students decide upon the training program that they

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26 Ibid. p 111, 116.
will undertake, and identify where there is opportunity to promote general practice as a discipline. The AMWAC Medical Careers Survey, 2002, found that one fifth of doctors chose their discipline by the end of medical school, 59.3% of doctors by the end of PGY2 and 79.1% by the end of PGY3.

Therefore, in terms of promoting general practice as a discipline, and rural practice in particular, it is important that medical students and interns have a good experience of rural community-based practice early in their university life and post-graduate training since the positive experience of a specialty and the encouragement of a mentor or role model has an influence on choice of discipline. Programs such as the Rural Remote Area Placement Program provide a rural community term for junior medical officers. It has been recommended by the Postgraduate Medical Council of NSW as a model to enable all junior doctors in Australia to broaden their clinical experience and gain a greater understanding of how the health system operates outside large metropolitan hospitals.29

However, lifestyle factors are the major barriers for doctors choosing not to work in rural practice. Of the 4,250 vocational trainees surveyed in the AMWAC Medical Careers Survey, only 14% had long-term plans to work in rural or remote areas. The barriers to rural practice identified by doctors in vocational training were:

- Long working hours including regular on-call due to a shortage of rural doctors
- Difficulty in getting leave from the practice including locum cover
- Lack of part-time or job share opportunities for women
- Cultural and lifestyle limitations in some country areas
- Professional isolation and lack of privacy in some cases
- Lack of employment opportunities for their spouse/partner including partners training with another medical college training program or pursuing a professional, city based career
- Lack of educational opportunities for their children i.e., ‘reputable’ schools and universities
- Travel costs to receive training
- Isolation from extended family and friends

In developing solutions to the rural and remote medical workforce shortage it is obvious that a new model of rural practice is needed that addresses lifestyle factors including reduced after hours commitment, further development of locum support systems, flexible employment and training opportunities, as well as engagement of local communities in seeking employment opportunities for spouses. The structural changes to rural practice would need to be promoted and marketed to medical students and young doctors in their hospital, community and rural terms in order to consider rural practice as a viable option for them and their families.

2.2.7 SATISFACTION WITH VOCATIONAL TRAINING PROGRAM

The AMWAC Medical Careers Survey 2002 provided a breadth of information with respect to vocational training programs as well as short and long-term career aspirations of trainees.

The following information describes the factors doctors identified as important in their training program. A matching of these factors against general practice vocational training may assist in teasing out whether there are aspects of the training program that impact on the general practice workforce shortages in rural and remote areas. An important consideration is the negative effect compulsory rural placement may have on attracting people to rural areas in the longer term, as described at the end of this section.

Satisfaction or dissatisfaction with a training program was determined by:

- Quality and type of education

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• Need adequate time for learning and not necessarily “on the job”
• Requirement for formal structured learning with input from senior staff and consultants
• Lack of access to formal training sessions particularly for doctors in rural areas

Quality of teachers and mentors
• Requirement for mentors to take interest in their trainees’ professional and personal lives, and be inspiring and enthusiastic teachers

Costs
• Particularly relating to training and exam fees
• Increased length of training adding to costs

Flexibility
• Training to be responsive/flexible to changes in family commitments particularly for female trainees
• Choose hours and location of training

Selection process
• Process needs to be clear and transparent
• Perceived pressure to accept rural placements in order to be accepted onto the general practice program

Examination process
• High cost
• Lack of transparency about pass rate, pass mark
• Considered outdated means of assessing clinical abilities and competencies

Of particular importance to general practice, was the perception that the compulsory rural term was overly inflexible and “forcing people to do rural placements would discourage them from pursuing rural work at
• Lack of facilities in rural placements leading to negative experience and making trainees unwilling to return to rural practice in the longer term
• Lack of access to educational input

Whilst the compulsory rural term is a strategy to give GP registrars exposure to rural practice and lifestyle, it has to be a term that is well supported, enjoyable and responsive to their family commitments otherwise there is the risk that they will be turned off rural practice forever.

2.3 Factors Contributing to Rural Medical Workforce Shortages Overseas

The factors contributing to the shortage of primary care doctors in Australia are mirrored in Canada, United Kingdom, United States of America and New Zealand.

In Canada there appears to be multiple reasons for the shortage of doctors including:

• Reduction in medical student enrolments in the 1990s
• Length of time it takes to train as a doctor (6 years)
• Ageing GP workforce, with the baby boomer generation of doctors soon starting to retire
• Lifestyle choices including reduced hours, less demanding specialties or restricting practice to particular cases of service
• Changes in the number and nature of services provided to the ageing population resulting in increased utilization of physicians (growing demand)
• Increased participation of female practitioners and desire to work more flexible hours
• Changing attitude of younger practitioners and desire to work more flexible hours

In the United Kingdom there is recognition that the country is not producing sufficient number of doctors to sustain the current workforce and meet growing demand and is tackling the shortage through:

• International recruitment of consultants, GPs and nurses concentrating on countries which have not been traditional sources of recruitment for the UK i.e., continental Europe

the end of training”. The negative aspects of the compulsory placement included:

- Increasing flexibility for doctors who wish to work < 50% fulltime
- Flexible retirement options and National Health Service pension
- Restructuring post-registration training and hence quicker production of consultants

In the United States the latest (2002/3) assessment of the US medical workforce concluded that the nation is likely to face a significant shortage of physicians in the coming years and the shortage would be most significant for non-generalists. The latest reports being considered forecasts demand to exceed supply in the range of 130,000 physicians by 2020.\(^3\)

In 2001, United States health care spending grew 8.7 percent to $5,035 per capita, and reached a total of $1.4 trillion. This equates to 14.1% of GDP (2001). The United States relies heavily on overseas trained doctors, with 24% of physicians being international medical graduates.

Factors likely to add to the shortage of physicians in the United States:

- Changing life styles for the newest generation of physicians, with the possibility that new male and female physicians will work fewer hours over the course of their career
- A potential increase in non-patient care activities by physicians including research and administration and a decrease in patient care activities
- A potential change in practice patterns for physicians over 50 including a reduction in hours worked prior to retirement and earlier retirement patterns
- Possible increases in departures from practice due to liability concerns of physicians
- Decreases in hours worked by physicians in training
- Possible decreases in immigration of graduates of foreign medical schools
- Possible increases in numbers of physicians limiting the number of patients on their panel (“boutique medicine”)
- Continuation of the rate of increase in the use of physician services by those over 45 which has been increasing for the past 20 years
- Increased use of services by the baby-boom generation compared to prior generations
- Expected increases in the nation’s wealth which would facilitate continued increases in the use of medical services
- Advances in genetic testing which could lead to increases in the use of services as individuals learn they are at increased risk and
- Additional medical advances likely to keep individuals with chronic illness alive longer without curing the illness.

According to the New Zealand Medical Association, the medical workforce is rapidly approaching a crisis situation.\(^3\) In a macro sense the workforce has been allowed to develop in a completely uncoordinated and non-strategic way. While the Medical Council of New Zealand (MCNZ) surveys medical practitioners annually and produces statistics related to registration of doctors, no other body, including government agencies, monitors the medical workforce in any comprehensive way. Individual District Health Boards to varying degrees, consider the immediate workforce problems within their own areas, but there is no national strategy and no overall monitoring of the workforce.

The New Zealand medical workforce is under a great deal of pressure in a number of areas:

- Like nursing, it is an ageing workforce
- Increasing shortages in a number of medical

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disciplines, including psychiatry, pathology, obstetrics and gynaecology, and general practice

- Low morale contributed to by:
- Long working hours within general practice
- Perception that the medico-legal environment in which they practice is a hostile one and there is an overall sense that the work of the profession is not valued, especially by the Government
- Recent policy decisions, such as the introduction of extended prescribing rights for nurses and others, are seemingly ad hoc approach to the extension of autonomous nursing practice, and the apparently wide-spread assumption that others can do doctors’ work, are concerns of the medical profession
- Student debt, with significant numbers of graduating students leaving for overseas or indicating their intention to do so
- Increased participation by women, about 50% of those entering the profession, with implication on working hours
- Large numbers of overseas doctors continue to enter the medical workforce (in 2000, 35% of New Zealand medical workforce trained overseas, and this does not include the 400-700 temporary registrants per annum)
- Ongoing difficulties in recruiting and retaining health care providers in rural areas
- Huge increase in cost compliance and administration, and the reduction in the commercial value of general practices, to the extent that few retiring general practitioners can now sell their practice
- Uncertainty about the future role for GPs in primary care
- Virtual disappearance of GP obstetrics

In summary, similar themes underpin workforce shortages in the United Kingdom, Canada, United States, New Zealand and Australia. The majority of these countries recognize that they are not training sufficient doctors to meet current and future demand, and continue to heavily rely on recruiting overseas trained doctors to fill workforce shortages. The demographics of the medical workforce are changing.

The workforce is ageing, with an increasing female participation. There is a shift in work patterns with doctors seeking improved working conditions with shorter and more flexible working hours. In addition, doctors are struggling with the increasing medical indemnity issues, and in New Zealand and Australia, face changes in the nature of their practice with respect to the role of nurses and opportunities for advanced procedural practice.
CHAPTER 3. UNDERSTANDING THE PROBLEM OF THE RURAL WORKFORCE SHORTAGE

3.1 MANIFESTATION OF THE PROBLEM OF THE UNDERSUPPLY OF RURAL AND REMOTE DOCTORS

How is the undersupply of doctors in rural and remote areas manifesting? What are the symptoms of this problem?

Numerous strategies have been developed to try to address the rural medical workforce shortage. Some of these strategies provide a short-term solution e.g., the employment of temporary resident doctors in medical officer positions, bonded scholarship holders as relievers. However, these strategies can in fact cause other problems such as high mobility of the workforce, increased medical retrievals due to lack of experience, or discouraging doctors from rural practice because they have not felt medically competent or well supported.

This chapter seeks to explore the impact the shortage of doctors has in rural and remote areas, and discuss some of the issues that have arisen as a result of short-term strategies that have been applied to the shortage. The impact of the rural and remote medical workforce shortage is seen at many levels. It affects the viability of rural communities, the health status of communities, continuity of patient care, viability of the doctor, placement of doctors with little orientation to the environment they are working in, quality of care, viability of a health service and access to other health professionals.

It is necessary to understand how the problems of medical workforce shortage manifest in order to develop models for sustainable service delivery down the track.

3.1.1 DECLINE OF RURAL COMMUNITIES

Country towns have faced progressive closure of banks, schools and hospitals in the process of economic restructuring across Australia. It is debateable whether the closure of hospitals and health services are directly related to the undersupply of doctors, however, it is easier to justify the closure of a health service when there is an ongoing problem of recruiting and retaining doctors and nurses to staff it. The decreasing population of some rural communities has resulted in a reduction of the number of doctors working in a hospital or practice. In other communities the difficulty in replacing doctors upon retirement increases the load on the remaining doctor(s) and result in a negative spiral, with further resignations and departures, or difficulties in recruiting to positions. No doctor, no pharmacy and communities fear that other professionals will leave as well because of the unavailability of these services.

The RDAA Viable Models project[^1] identified the costs to a community of not having a local GP as:

- Poorer community health outcomes
- Job losses
- Potential loss of population and other services
- Risk of precipitating ‘cycle of decline’
- Costs of evacuation and retrieval services

Costs to individual of not having a local GP were:

- Economic and social costs associated with accessing medical care elsewhere
- Loss of income potential
- Anxiety, insecurity about meeting health needs

Costs to family and carers of not having a local GP:

- Travel and time to accompany and visit patient elsewhere
- Loss of potential income
- Possible need to relocate
- Anxiety, insecurity about meeting health needs

3.1.2 HEALTH STATUS

The health status of rural Australians declines with distance from metropolitan and regional centres. Major health problems are wide spread in rural and remote

areas and are linked to the rural decline, unemployment, low income levels, pre-existing lifestyle and cultural attitudes towards health, low education levels, isolation and lack of transport.

The AIHW Report, Rural Health Series No.2, 2003, has shown categorically that death rates in regional and remote areas are 10 per cent higher than in major cities, and 50 per cent higher in very remote areas, even though death rates have declined since 1992 in very remote areas faster than in metropolitan and rural areas. This has been due largely to some success with circulatory disease, respiratory disease and cancer. The AIHW study has found that higher death rates in regional and remote areas persist after taking into consideration inter-regional differences in age, sex, indigenous status and accounting for migration of frail elderly from rural and remote areas.

A comparison of statistics for rural and remote residents compared with metropolitan residents shows:

- Higher rates of premature death from injury or accident particularly among men
- Higher rates of road injuries and fatalities, the latter linked to remoteness of accident sites and consequent access to facilities and medical professionals
- Higher mortality related to coronary heart disease, diabetes and asthma
- Higher rates of hospitalisation and death from falls and burns in people over 65 years
- Higher incidence of low birth weight and infant mortality (related to higher proportion of indigenous people)
- Lower incidence of cancer detection
- Among rural and remote women, higher rates of risk factors including obesity, alcohol intake and smoking
- Suicide, depression and other mental health problems higher, with suicide rate of men higher in rural areas

However, are these poorer health statistics related to the shortage of doctors in rural and remote areas? AMWAC contends that the growth in GP servicing in capital cities over the period 1984/85 to 1997/98 did not appear to be associated with better health outcomes on measures such as mortality, hospitalisations, risk factors and self-assessed health status. It is suggested that poorer health outcomes of rural, indigenous and low income Australians are not attributed to lack of medical services, but that appropriate services are essential for addressing the greater health care needs of these groups.

There may well be an upper and lower threshold of access to GP services that impacts on health outcomes of a community. Medicare data demonstrated that where there is an oversupply of GPs in metropolitan areas, consultations were shorter, more follow-up consultations were arranged, and there were more medications and diagnostic tests ordered per capita compared with doctors in other areas – this was seen as over-servicing or supplier induced demand. However, undersupply of GP services impacts on access to preventative medicine, which is important to address the effects of socio-economic and related disadvantage. At this lower threshold AMWAC contends that the combination of practitioner shortages, remoteness from services, lack of transport and cultural inappropriateness of some services, results in primary health care not being accessed and conditions becoming more serious before they are treated. The AIHW report suggests that the difference in mortality rates observed in regional and remote areas compared with metropolitan areas are due to a combination of lower socio-economic status.
poorer risk factors (e.g., higher rates of smoking and alcohol use), higher risk occupations contributing to injury e.g., farming, and environmental factors, unsealed roads.40

Evidence of rural practitioner shortages impacting on treatment choice is seen where rural women are more likely to choose tubal ligation, hysterectomy and mastectomy, if they are unable or unwilling to access services requiring repeated or prolonged attendance away from home.41

Queensland data would indicate that access to medical practitioners impacts on frequency of visits to a doctor.

### Table 3. Patients accessing general practitioners by Division

<table>
<thead>
<tr>
<th>Division name</th>
<th>FTE</th>
<th>FWE</th>
<th>NRA/SWPE</th>
<th>SWPE/FWE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Qld Rural</td>
<td>118.6</td>
<td>144.5</td>
<td>5.58</td>
<td>879</td>
</tr>
<tr>
<td>Central West Qld Rural</td>
<td>8.6</td>
<td>8.8</td>
<td>4.77</td>
<td>963</td>
</tr>
<tr>
<td>North and West Qld Primary Health Care</td>
<td>46.2</td>
<td>64.2</td>
<td>5.10</td>
<td>992</td>
</tr>
<tr>
<td>Central Queensland</td>
<td>31.8</td>
<td>39.1</td>
<td>5.19</td>
<td>1,003</td>
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<tr>
<td>Far North Qld</td>
<td>62.5</td>
<td>70.0</td>
<td>5.03</td>
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<tr>
<td>Rural Mean</td>
<td>53.5</td>
<td>65.3</td>
<td>5.13</td>
<td>969.2</td>
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<td>Provincial</td>
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<tr>
<td>Sunshine Coast</td>
<td>250.0</td>
<td>303.9</td>
<td>6.24</td>
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<tr>
<td>Gold Coast</td>
<td>309.4</td>
<td>378.9</td>
<td>6.21</td>
<td>896</td>
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<tr>
<td>Mackay</td>
<td>81.9</td>
<td>99.4</td>
<td>5.51</td>
<td>912</td>
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<tr>
<td>Redcliffe Bribie Caboolture</td>
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<td>153.0</td>
<td>6.56</td>
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<tr>
<td>Cairns</td>
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<td>113.1</td>
<td>6.03</td>
<td>923</td>
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<tr>
<td>Wide Bay</td>
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<td>144.6</td>
<td>5.49</td>
<td>939</td>
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<tr>
<td>Toowoomba</td>
<td>103.1</td>
<td>133.9</td>
<td>5.80</td>
<td>940</td>
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<tr>
<td>Ipswich West Moreton</td>
<td>105.2</td>
<td>132.5</td>
<td>6.3</td>
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<tr>
<td>Capricornia</td>
<td>86.3</td>
<td>101.1</td>
<td>5.15</td>
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<tr>
<td>Townsville</td>
<td>82.6</td>
<td>98.6</td>
<td>5.08</td>
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<td>Provincial mean</td>
<td>134.9</td>
<td>165.9</td>
<td>5.8</td>
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<tr>
<td>Metropolitan</td>
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<tr>
<td>Logan Area</td>
<td>177.0</td>
<td>224.9</td>
<td>7.01</td>
<td>898</td>
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<tr>
<td>Brisbane Inner South</td>
<td>114.6</td>
<td>133.6</td>
<td>6.25</td>
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<td>Bayside</td>
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<td>159.8</td>
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<tr>
<td>Brisbane Southside Central</td>
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<tr>
<td>Brisbane North</td>
<td>461.1</td>
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<td>Metropolitan mean</td>
<td>219.1</td>
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<td>6.43</td>
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<td>All Divisions</td>
<td>2,712.5</td>
<td>3,281.3</td>
<td>6.02</td>
<td>921</td>
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</tbody>
</table>

Source: HIC report to QRMSA Year ending June 2002

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42 HIC report to QRMSA for year ending June 2002.
Table 3 describes the number of fulltime equivalent doctors (FTE), fulltime workload equivalent (FWE) and non-referred attendances (NRA) per standard whole patient equivalents (SWPE) by Division of General Practice in Queensland.

Patients residing in rural divisions access the primary care doctor 5.13 times per year, approximately 1 visit less per year than patients in metropolitan Divisions (Table 3). In Divisions where there is a recognised shortage of GPs i.e., all rural Divisions as well as the provincial Divisions of Townsville and Capricornia, there is a higher ratio of standardised whole patient equivalents per fulltime workload equivalent and non-referred attendances/SWPE are below the state average. [SWPE/Fulltime Workload Equivalent is a more accurate measure of the patient to doctor ratio than population/FTE GP, because on the patient side SWPE takes into account age and chronicity, whilst fulltime workload can account for additional patients seen above the full-time equivalent which can never be higher than 1.0.]

3.1.3 HEAVY RELIANCE ON TEMPORARY RESIDENT DOCTORS

Australia is a net importer of doctors, using overseas trained doctors to assist in meeting workforce shortages.

Overseas trained doctors are categorised as either overseas trained doctors coming to Australia on a temporary basis i.e., temporary resident doctors (TRDs) or as permanent residents. TRDs working in general practice in rural and remote areas usually enter Australia to work in medical positions designated as being an ‘area of need’ by the relevant State or Territory health authority.

As described earlier in this paper, the government has sought to restrict the immigration of OTDs to Australia, and restrict access to provider numbers in order to slow the growth in the medical workforce that was evident in the mid 80s to mid 90s and to address the mal-distribution of the GP workforce. However, Australia has always been a net importer of doctors, and over the past decade permanent entries exceeded exits by between 200 and 400 per year.43

Australia relies on OTDs and TRDs to fill vacancies in areas of workforce shortage, and an AMWAC report in 1999 predicted that the recruitment of TRDs was likely to increase at an annual rate of 25%, at least in the short-term.44 This has been borne out by the following data. During a 12-month period in 1997-98 over 1,700 TRDs entered Australia to work as medical practitioners, staying just under 12 months.45 This number increased in the 1998-99 period to over 2,200,46 and to 2,656 at June 2002. At any one time there are around 3,000 TRDs in Australia.47

At a national level in 2001, overseas trained doctors accounted for 24.5% of doctors working in rural areas, 30.8% of doctors in remote areas and 21.3% in metropolitan areas.48 In Queensland the proportion of OTDs (inclusive of permanent residents and TRDs) is higher than the national average, with OTDs comprising 41.7% of the primary care workforce in rural areas.49 A breakdown of OTDs by RRMA is provided in Table 4A.

While approximately 41.7% of the current Queensland rural and remote workforce have received their basic medical training overseas, more than half of the overseas trained doctors (54.38%) now have Australian citizenship or permanent residency (Table 4B). When residency status of doctors by RRMA is examined, 19% of doctors working in RRMA 4-7 have temporary residency status.

44 Australian Medical Workforce Committee. (1999), Temporary Resident Doctors in Australia, AMWAC Report. Sydney: AMWAC.
45 Ibid.
Australia will continue to rely on overseas trained doctors to meet its shortfall, as recent strategies to increase university medical positions and general practice training places are longer-term strategies to increase local supply. However, Australia operates in a global market place, competing with the United States of America, Canada, United Kingdom, New Zealand and South Africa for doctors. In addition to this the Melbourne Manifesto\(^5\) has set a code of practice for the international recruitment of health care professionals, calling on importers of health professionals, such as Australia, to examine the effect that their recruitment policies have on lesser developed countries from which Australia draws doctors. The code of practice calls on the “importers” to develop sufficient training places to meet their domestic need, and proactively ensure working conditions in areas of need are improved so that local doctors are recruited to these areas rather than continuing to recruit from overseas countries.

### 3.1.4 High Mobility of the Workforce

The reliance on TRDs to fill areas of workforce shortage creates a very fragile environment in rural and remote areas reflected in the relatively high mobility of the medical workforce. Rural Workforce Agencies closely monitor the medical workforce in RRMA 4-7 and the QRMSA reported at May 2003 that in the period 1st December 2002 to 31st May 2003 there were 192 new arrivals into RRMA 4-7 and 154 departures from RRMA 4-7.

The following tables (5 and 6) describe the arrivals and departures by employment type. Note that this data includes state salaried doctors (Resident Medical Officers, Senior Medical Officers and Medical Superintendents) who do not have right of private practice. However, due to the nature of medical service provision in Queensland, it is estimated that 60-70% of these doctors provide primary care/GP services in their communities. In the absence of a reliable method of

| Table 4A. Distribution of Overseas Trained Doctors by RRMA in Queensland |
|-----------------------------|---|---|---|---|
| RRMA | 4 | 5 | 6 | 7 |
| Overseas Trained Doctors | 134 | 171 | 51 | 32 |
| Total | 388 |

| Table 4B. Residency Status by RRMA, Queensland |
|-----------------------------------------------|---|---|---|---|---|
| Citizenship Status | Australian | Permanent | Temporary | Total | % Temporary |
| RRMA | | | | | |
| 4 | 238 | 49 | 57 | 344 | 16.57 |
| 5 | 278 | 61 | 72 | 411 | 17.52 |
| 6 | 55 | 10 | 34 | 99 | 34.34 |
| 7 | 55 | 8 | 14 | 77 | 18.18 |
| Total | 626 | 128 | 177 | 931 | 19.01 |

<table>
<thead>
<tr>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Trained Doctors</td>
<td>543</td>
</tr>
<tr>
<td>Overseas Trained Doctors</td>
<td>388</td>
</tr>
<tr>
<td>Overseas trained and Australian citizens or permanent residents</td>
<td>211</td>
</tr>
<tr>
<td>Overseas trained and temporary residents</td>
<td>177</td>
</tr>
</tbody>
</table>

Source: QRMSA Minimum Data Set 30th November 2003

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\(^5\) www.ruralhealth2002.net/melbourne_manifesto.pdf
differentiating their degree of primary care provision, they are included in the current dataset. The negative aspect of this inclusion is that it probably overestimates primary care/GP type services currently available in rural and remote Queensland. RFDS Medical Officers working from Cairns have been classified as RRMA 7 due to the communities they service.

Analysis of doctor movement relative to the number of doctors working in each RRMA is shown in Table 7.

Within this 6-month period, an average of 16.5% of doctors exited their community, however this was more pronounced in RRMA 7 with 26.2% of doctors leaving. Whilst it is recognised that there has been a net increase in doctors in this period, and that the data indicates that new doctors have arrived, the high turnover of doctors has serious implications for continuity of care and development of preventative health care.

### Table 5. Number of new arrivals by RRMA, period 1st December 2002 – 31st May 2003

<table>
<thead>
<tr>
<th>Employment type</th>
<th>RRMA 4</th>
<th>RRMA 5</th>
<th>RRMA 6</th>
<th>RRMA 7</th>
<th>Grand total</th>
</tr>
</thead>
<tbody>
<tr>
<td>General practitioner</td>
<td>41</td>
<td>54</td>
<td>7</td>
<td>5</td>
<td>107</td>
</tr>
<tr>
<td>Med Super</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Med Super Right to Private Practice</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>RFDS</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Resident Medical Officer</td>
<td>31</td>
<td>5</td>
<td>18</td>
<td>2</td>
<td>56</td>
</tr>
<tr>
<td>Senior Medical Officer</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td>79</td>
<td>67</td>
<td>28</td>
<td>18</td>
<td>192</td>
</tr>
</tbody>
</table>

### Table 6. Number of departures by RRMA, period 1st December 2002 – 31st May 2003

<table>
<thead>
<tr>
<th>Employment type</th>
<th>RRMA 4</th>
<th>RRMA 5</th>
<th>RRMA 6</th>
<th>RRMA 7</th>
<th>Grand total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal Community Controlled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical service</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>General practitioner</td>
<td>29</td>
<td>43</td>
<td>2</td>
<td>4</td>
<td>76</td>
</tr>
<tr>
<td>GP/Academic</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Med Super</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Med Super Right to Private Practice</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>RFDS</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Resident Medical Officer</td>
<td>22</td>
<td>9</td>
<td>12</td>
<td>4</td>
<td>47</td>
</tr>
<tr>
<td>Senior Medical Officer</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td>52</td>
<td>62</td>
<td>18</td>
<td>22</td>
<td>154</td>
</tr>
</tbody>
</table>

### Table 7. Departure of doctors by RRMA

<table>
<thead>
<tr>
<th>RRMA</th>
<th>No. doctors in RRMA</th>
<th>No. doctors departing</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>337</td>
<td>52</td>
<td>15.4</td>
</tr>
<tr>
<td>5</td>
<td>410</td>
<td>62</td>
<td>15.1</td>
</tr>
<tr>
<td>6</td>
<td>100</td>
<td>18</td>
<td>18.0</td>
</tr>
<tr>
<td>7</td>
<td>84</td>
<td>22</td>
<td>26.2</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td><strong>931</strong></td>
<td><strong>154</strong></td>
<td><strong>16.5%</strong></td>
</tr>
</tbody>
</table>

Source: QRMSA Minimum data set report 31st May 2003
The employment groups that show high mobility are the general practitioners, medical officers and senior medical officers. The mobility of doctors in the general practitioner group may be partly due to movement of GP registrars fulfilling their training requirements. Doctors employed as Senior Medical Officers and Medical Officers by Queensland Health will include TRDs and OTDs, as well as bonded scholarship holders and junior medical officers undertaking community and rural terms/“relieving terms”.

Hospitals in remote indigenous communities are largely being staffed by TRDs, or by rotating junior doctors from larger hospitals. As an example, Doomadgee in the Gulf of Carpentaria has been staffed by TRDs appointed as Medical Superintendents and Medical Officers for the last 9 of the past 10 years. Mornington Island has also been staffed by a mix of TRDs and relieving doctors from Mt Isa Base Hospital on an ongoing basis for 10 years. In most cases these doctors stay in their post for 6 to 12 months.

A contributing factor to the mobility of TRDs may relate to the restrictions placed on themselves and families as temporary residents, which could result in the doctor and their family relocating to another country. Despite paying tax (and often at the highest rate) TRDs and their family cannot access Medicare for their own health care. In some states children of TRDs who attend school are charged full cost recovery to attend primary and secondary school, and all tertiary education is charged at full fees. Furthermore, there is confusion around the rights of TRDs to enter credit arrangements and to own property, impacting on opportunities to buy into practice ownership and creating inequity in ownership, decision-making and satisfaction within the practice. As there is global competition for TRDs, and this is likely to increase, current immigration policies may exacerbate mobility.

### 3.1.5 Impediment to Patient Care

The high mobility of doctors in rural, but particularly remote areas, where they are likely to work in solo practice has significant impacts on a community. The lack of consistency negatively impacts on continuity of patient care, impedes the development of primary health care programs/preventative medicine initiatives to address chronic disease and other health problems, and impedes access to medical services particularly for groups that seek to develop rapport or trust in practitioners i.e., indigenous people.

### 3.1.6 Orientation to Culture and Rural/Remote Practice

Temporary resident doctors can be recruited and managed (sponsored) by a range of organizations including but not limited to: individual shire councils, state health departments, rural workforce agencies, divisions of general practice, private general practices. Requirements for entry to the workforce vary from State to State as a result of State Medical Board registration policy on entry standards.

**However, does the selection process seek to ensure a successful international medical placement, or is the current workforce shortage over-riding best practice human resource management and taking “who will come”?**

TRDs are recruited to fill salaried positions in areas where medical doctors are required but not available (i.e., under-supplied areas or areas of unmet need). The positions must be fully labour market tested or the relevant State/Territory Health Department must have advised that people with skills required are not available in Australia. OTDs who hold temporary resident visas receive conditional registration from a State Medical Board, and visa validity is usually in line with the period of registration. TRDs are employed for specific periods of time and are restricted to practise in areas of unmet need, usually under supervision. However, it appears that this supervision can be provided by distance as TRDs working in remote Queensland e.g., Doomadgee and Mornington Island do not have a medical supervisor on-site. Sponsorship is required regardless of the period of stay and they cannot change employer without prior permission.

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Most TRDs working in rural and remote areas are employed under the Regional Sponsored Migration Scheme. Here the employer must demonstrate that the position is a genuine vacancy and cannot be filled from the local labour market. The position must be available for at least two consecutive years, employment and remuneration are in accordance with Australian industrial law, and an employment contract or letter of appointment will be entered into between the employer and nominee.

Visa application through the Regional Sponsored Migration Scheme is assessed by the Department of Immigration and Multicultural Indigenous Affairs. The criteria for assessment include:

- Nominee has relevant qualifications
- Nominee eligible for medical Board registration through the AMC process
- The position is a fixed term of at least 2 years
- Nominee is less than 45 years
- Nominee has functional English language ability
- Nominee and all family members meet mandatory health and character requirements.

The recruitment and selection process varies across sponsoring agencies but a review of the selection processes used by a number of sponsors in Tasmania, the Rural Workforce Agency Victoria, and the Queensland Rural Medical Support Agency suggests that emphasis is placed on interviews, some assessment of clinical skills, and referee checks. This is in agreement with AMWAC (1999) reporting that professional registration checks, referee checks and interviews (usually undertaken in the candidate’s home country) is the usual selection process. The support that a TRD obtains on placement is largely dependent on their sponsor.

An analysis of international human resource management practices by Wolfe (2001), has identified selection criteria that assist in successful international assignments. These include:

- Cultural adaptability including cross-cultural fluidity, previous overseas experience, cultural sensitivity
- Tolerance of ambiguity
- Maturity
- Stability and ability to adapt behavioural style
- Identification of needs of the family, and involving the spouse/family in the selection process from the start
- Technical ability

How effective are the current recruitment and selection processes used by organizations in identifying and matching TRDs to communities?

The Tasmanian case studies conducted by Wolfe (2001) indicated that implementation of best practice recruitment and selection processes for overseas trained medical practitioners were variable and inconsistent, and continued to focus on technical ability with little focus on personal dimensions.

How effectively do current sponsors manage the transition from departure from the home country to arrival in Australia in terms of support and orientation of the doctor and family, particularly when these doctors are being located to small rural and remote communities, which often have a high indigenous population?

Professional registration is often undertaken as a registration requirement on arrival in Australia. Cross-cultural training however, is ad hoc and left to the recruiting organization and/or employer.

Whilst it is acknowledged that there will be some mobility of doctors for training purposes and lifestyle choices, strategies to reduce doctor mobility in rural and remote areas need to be developed to improve

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continuity of care, development of preventative health programs and primary health care initiatives, improve integration with other health and community service providers and improve access to services by indigenous people. The strategies need to look at the aptitude of doctors, both Australian and OTDs/TRDs for rural and remote practice, an assessment of the cross-cultural adaptability of the doctor and perhaps also their family, ensuring that the doctor and family have cross cultural training, and sponsors and employers (of Australian doctors) seek to identify, and where possible, meet the needs of their family.

A recent study undertaken by QRMSA indicated that spouses and children of doctors in rural and remote areas (both Australian and overseas born) can have difficulty fitting into the rural lifestyle, and majority of spouses went to the rural setting because of the work available for the doctor. The main issues identified by the doctors’ spouses relating to orientation to rural and remote practice were:

- Social isolation and breaking the barrier between acquaintance and friend, with over 40% of partners of OTDs indicating that they had not established close friends or confidants in their community. Younger children of OTDs had difficulty forming friendships, particularly for TRDs being frequently relocated, and impacting on the socialisation of the children.
- Lack of access to certain facilities such as religious/cultural facilities and recreational opportunities
- Little control over their present situation as 70% moved to their present setting for employment reasons of their doctor spouse
- Community pressures and expectations resulted in feelings of normlessness (having to modify one’s behaviour to conform to community norms and expectations
- Provision of up to date and accurate information prior to moving to the community was important in determining whether their initial rural experiences were positive.

Strategies to assist spouses and families of both Australian and overseas doctors to prepare for moves to rural and remote communities, and assistance in establishment of local support networks through community groups, Divisions of General Practice and Rural Workforce Agencies may assist in orientation to rural practice and improve the “happiness” of the doctor and family, improve effectiveness and reduce mobility. Conversely, cross-settlement education at a community level may assist communities in the adoption of the immigrant doctor and family.

3.1.7 Does the rural doctor shortage impact on quality?

The current measures of quality in general practice relate to vocational registration of the doctor, and accreditation of the practice.

At a national level 90% of the general practice workforce are vocationally registered (VR) and 10% are non-VR general practitioners. In Queensland in RRMAs 4-7, 59% of medical practitioners are VR, an additional 9% have VR status due to enrolment on the general practice training program i.e., GP registrars, and 32% do not have vocational registration.

3.1.7.1 Vocational registration as a measure of quality

In 1999, Flinders University undertook a literature review on behalf of the Royal Australian College of General Practice, pertaining to the evaluation of general practice vocational training programs. The review discussed differences between VR and non-VR practitioners categorised under:

- Enhanced communication skills
- Applied professional knowledge and skills

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59 School of Medicine, Flinders University of South Australia. (1999). Outcomes evaluation on general practice vocational training programs: A literature review.
• Professional and ethical role
• Organizational and legal issues

Although the review of research was not conclusive, there was some empirical support for vocational registration being an indicator of quality across some areas. The review presented the following conclusions.

• At least some communication skills ratings improve after exposure to vocational communication skills training
• General practice registrars or graduates appear to demonstrate greater skill and feel more comfortable with general practice areas, but may be less confident in dealing with complicated internal medicine problems and some surgical techniques
• Very little outcomes work has been done in the population health area, but some studies indicate that targeted training can help prepare registrars for particular aspects of general practice
• There may be some problems with the perception of a general practice registrar being a ‘hospital doctor’ and therefore not receiving appropriately differentiated training during hospital posts
• Very little outcomes work has been done in the organization and legal area, but there appears to be a lack of training in the financial management area generally
• In the few studies available, general practice training is generally seen to be useful and appears to assist in increasing job satisfaction
• Patients have different methods of assessing clinical performance and quality of care for both clinicians and other groups of patients
• Almost no work has been done relating costs of vocational training to educational outcomes.

According to studies undertaken by the College of Non-Vocationally Registered Practitioners, Non VR and VR general practitioners have similar prescribing habits, similar referral habits, and identical medical indemnity insurance premiums. In addition, practitioners in both groups are able to join all General Practice representative organizations with full membership. 60 A major difference, however, between VR and Non VR practitioners is that VR practitioners have Medicare rebates approximately 37% higher than Non VR practitioners. According to the Non-VR College, bulk billing rates for both groups are almost identical, and in fact bulk billing is slightly more popular amongst Non-VR GPs despite the lower rebate.

Does the lower rate of vocational registration in rural and remote areas impact on quality in terms of patient outcomes? It would appear that the evidence isn’t available one way or another.

3.1.7.2 PRACTICE ACCREDITATION AS A MEASURE OF QUALITY

The need for improvements in efficiency and effectiveness in healthcare is well established. Healthcare services are operating, like other businesses, in a competitive market. 61 In this context there is a need to explore the potential of various mechanisms for ensuring safe, high quality healthcare that is viable, affordable and accountable. Accreditation is one mechanism, which is being used internationally to bring about such improvements.

The accreditation process usually requires integral self-examination of the organization, followed by an on-site visit by an evaluation team, and a subsequent review and decision by a central governing group made up of industry representatives. Institutional accreditation (such as practice accreditation) cannot guarantee the quality of individual graduates within that organization, but can give reasonable assurance of the context and quality of the services offered.

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60 Australian College of Non Vocationally Registered General Practitioners Inc. (2003). Submission by the Australian College of Non Vocationally Registered General Practitioners to the Senate Select Committee on Medicare. Balair, SA.
PROCESS OF PRACTICE ACCREDITATION

To achieve accreditation, practices must meet the Royal Australian College of General Practitioners’ standards for general practice. The standards relate to medical services; the rights and needs of patients; quality assurance and education; administration; and the design of, and equipment in, the surgery. Currently there are two practice accreditation bodies in Australia: Australian General Practice Accreditation Limited (AGPAL) and General Practice Accreditation (GPA). At present, there are approximately 5000 AGPAL accredited practices in Australia. Queensland has the highest number of AGPAL accredited practices (95%, as of 1 Aug 2003). AGPAL accreditation currently operates on a three year cycle.

QUEENSLAND RURAL DIVISIONS OF GENERAL PRACTICE – PRACTICE ACCREDITATION

- Far North Queensland Rural Division of General Practice. There are 32 private practices in the FNQRDGP of which 28 are accredited (87.5%). There are also 5 Aboriginal Community Controlled Health Centres, only 1 of which is undergoing accreditation
- North and West Queensland Primary Health Care (the resultant entity from the amalgamation of the Northern Qld Rural Division of General Practice and Central West Qld Rural Division of General Practice). There are 24 Practices in North Queensland, and 6 in Central West. Two of the 6 practices in Central West are accredited, and 19 of the 24 practices in North Queensland are accredited i.e., 21 of 30 practices, 70%. In North Queensland, 3 of 5 practices not accredited are currently undergoing accreditation, the fourth practice will soon close as the doctor is retiring, and the fifth is owned by a third party and is not pursuing accreditation
- Central Queensland Rural Division of General Practice. There are 19 practices in the Division and all are accredited, 100%
- Southern Queensland Rural Division of General Practice There are 68 practices in the Division, of which 51 practices that are fully accredited with AGPAL i.e., 75%.

The relatively high rate of practices attaining accreditation (between 70 and 100%), and those preparing for accreditation would indicate that rural practices have embraced a continuous quality improvement process, and that workforce shortages are not impeding this.

3.1.8 IMPACT ON TRAINING

A pilot study conducted in Central Australia found that workforce shortages negatively impacted on GP Registrars reaching their full educational potential. The barriers to maximising learning opportunities were:

- Lack of opportunity to observe their GP supervisors during consultations and performance of procedures because under fee for service funding income is dependent on contact time, and shortage of GPs in the region
- Geographical isolation from educational resources
- Mismatch between the training expectations of the GP Registrars and the expectations of the GP Supervisors
- GP supervisors are doctors first and teachers second, impacting on their time for teaching in areas of workforce shortage

The author warns that there is the risk that training medical practitioners in areas of workforce shortage may create a negative learning experience and decrease enthusiasm to stay in that geographical area. This supports the issues raised in the AMWAC Medical Careers Survey where training in rural and remote practices needs to be positive and well supported experience otherwise doctors will not return.

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64 Data provided by each rural Division of General Practice.
Workforce shortages in rural areas were also found to affect the quality of supervision available for junior medical officers on rural terms. The national review of community and rural terms for junior doctors (PGY2 and PGY3) found that supervision could be by locums, overseas trained doctors and visiting specialists on occasion. Supervision issues were of most concern in Emergency Departments where there may be poor access to a registrar or attending GP. Workload of registrars and salaried medical officers impacted on the level of support and supervision offered to junior medical officers, and that junior medical officers relied on phone advice from registrars, GPs and consultants. Furthermore, the review found that on the Queensland rural relieving terms there is often no direct medical supervision.66

These reports highlight the negative impacts workforce shortages have on training and risks associated with using trainee doctors to fill workforce gaps.

3.1.9 MAINTENANCE OF PROCEDURAL SKILLS

The shortage of doctors in rural communities is impacting on the maintenance of procedural skills. A survey of procedural GPs in NSW found that the size of the GP workforce practising advanced procedural skills in obstetrics and anaesthetics has fallen by about a third in the last 10 years.67 As well as community demographics, individual workloads were influenced by the availability of other advanced procedural skills in the town, either by other GP proceduralists or by resident or outreach specialist services. As an example, the absence of anaesthetic skills impacts on both surgical lists and all but low risk obstetrics.

However, other factors were also shown to impact on the maintenance of GP procedural skills. GPs reported procedural workload being affected by the local hospital/Area Health Service administration through its influence on facilities supplied by the hospital (physical i.e., downgrading facilities or closing theatres, and financial, i.e., limiting lists, operating days), types of procedures which can be performed and supply of suitably qualified nursing staff (midwives, theatre staff). Reduction in opportunities to perform procedures leads to de-skilling.

Specialists could either increase or decrease procedural workload of GPs. Increasing work by visiting or resident surgeons increased procedural work for GPs, especially anaesthetics. Conversely, where specialists were geographically close by they tended to carry out a lot of procedures that would have otherwise been done by GPs, and there was pressure to refer cases to specialists.

The QRMSA minimum data set collects information on the number of doctors undertaking procedural work (Table 8). This data has only been collected over the last 2 years, and trend data is not yet available. However, anecdotal evidence indicates that there has been a reduction in the number of GPs undertaking procedures since collection commenced. The reasons cited for ceasing procedural work include heavy indemnity costs, poor financial return, long days on call, difficulty in maintaining skills and the unpredictable nature of medical defence.68

In Queensland, visiting specialists i.e., the flying obstetrician, flying surgeon based in rural areas and servicing other rural and remote communities, undertake regular lists at some locations and this provides the opportunity for local procedural GPs to maintain their skills.

3.1.10 ACCESS TO QUALITY LOCUM RELIEF

Lack of locum relief has clearly been identified as a major professional disadvantage in the retention of doctors in rural practice,49 exacerbating the heavy workload of rural GPs and not allowing relief from the constant stress of rural practice. Whilst a range of programs and strategies have been implemented to provide locum relief including those provided by the Rural Workforce Agencies, private locum agencies, and

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68 Qualitative comments made by doctors completing the annual minimum data set survey, QRMSA Minimum Data Set, November 2002.
in Queensland the rural relievers program, are not adequate to meet demand with respect to:

- Size of the locum pool
- Quality of relievers

Queensland has a unique system of “rural relieving” positions which has been running since the 1950s. Junior medical officers are sent to relieve the medical superintendents or senior medical officers of rural hospitals. The program is managed on a geographical basis. There are two coordinators of the rural relieving program, one based in Townsville supporting the northern area, and one at Royal Brisbane supporting the southern network. The northern network relies on PGY3 doctors and junior medical officers are sent rural relieving for periods of 11-13 weeks. The southern network relies on PGY2 doctors, and their relief period is 4-6 weeks. There is minimal direct supervision of many of the rural relieving terms, particularly in smaller rural towns, exacerbated by workforce shortages. The lack of supervision raises safety issues in small communities where junior doctors may be called on to manage severe trauma on their own.

Medical Superintendents in rural and remote Queensland communities indicated that the lack of regular and reliable relief, and experienced locums is impacting on the retention of doctors in these areas. Whilst doctors in these salaried positions are entitled to locum cover every 28 days, staff shortages in the “supplier” hospitals are causing uncertainty as to whether cover will be available to these solo positions. As an example, the Gold Coast Hospital usually supplies relievers to some hospitals in the Central West, however, shortages of doctors at the Gold Coast has resulted in the hospitals of Alpha and Barcaldine being advised that they will not be able to assist with locum coverage in November, 2003. In the north, Mt Isa hospital has sought locums from QRMSA for the period September to December 2003. Therefore workforce shortages in provincial and metropolitan hospitals are also impacting on workforce issues in rural and remote areas.

The Queensland Rural Medical Support Agency also operates a locum service in order to provide subsidised locum relief for private medical practitioners in rural and remote locations. This service is also extended to all Aboriginal Community Controlled Health Services. Over the period 1st July 2003 to 31st December 2003 the QRMSA provided 135 short-term locum placements totalling 1801 days to rural and remote practitioners in Queensland. A number of rural and provincial divisions of general practice also provide locum services and locum relief can also be provided by private agencies. Larger practices are less likely to utilise locum services and tend to arrange relief internally within the practice. While being a major supplier of locums to doctors in private rural practice, there can be difficulties in having sufficient numbers of

<table>
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<tr>
<th>Procedural work</th>
<th>RRMA 4</th>
<th>RRMA 5</th>
<th>RRMA 6</th>
<th>RRMA 7</th>
<th>Total</th>
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<td>62</td>
<td>23</td>
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<tr>
<td>Surgery Operative</td>
<td>12</td>
<td>30</td>
<td>9</td>
<td>5</td>
<td>56</td>
</tr>
</tbody>
</table>

Source: Queensland Rural Medical Support Agency Workforce Analysis, May 2003
Note: Doctors who undertake procedural work often have qualifications in two or three procedures.

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locums available during peak periods of demand (e.g., school holidays). Although the priority of the QRMSA locum service is in assisting private practitioners, support has been extended to other organisations such as RFDS and Queensland Health where spare capacity has been available.

The QRMSA also administers the Rural Locum Relief Program (RLRP) in Queensland. This program, despite its name is more a long-term placement program in designated Districts of Workforce Shortage and is discussed in Chapter 4.

### 3.1.11 Retention of Nurses and Allied Health Professionals

The inter-relationship between an adequate supply of, and appropriately skilled medical practitioners, nurses (both primary health care, midwives and theatre skilled) and allied health professionals could be thought of as symbiotic, working as a team in both the primary health care and acute care arena. Where there is a shortage of one or more of the team members the relationship becomes unbalanced placing greater load on remaining team members and impacting on the type or quality of services delivered.

Currently throughout rural, remote and some regional parts of Australia there exists shortages of general practitioners, specialists, nurses and allied health professionals. Does the shortage of one group impact on the retention others?

The undersupply of midwives and hospital nursing staff is negatively impacting on procedures performed in rural and remote hospitals in NSW74 and Queensland.75 Cessation of procedural work in a community hospital, or decreased procedural workload (for whatever reason i.e., doctor initiated or health service initiated), will flow-on to affect the skills of the midwives and theatre nurse. This will ultimately affect the retention of nurses if they wish to continue to use these skills.

In Queensland, the shortage of nurses and difficulties in recruiting to rural areas has resulted in increased reliance on agency nurses. Often these nurses are only in communities for relatively short periods of time (6 weeks). As well as the significant financial cost of using agency nurses, the use of contract nurses is placing a greater burden on the resident health professionals in a number of ways. There is an increased need to orientate to the hospital, and there is variable experience/skill level. The level of experience impacts on the nurse’s ability to triage, resulting in more frequent call outs for doctors after hours.76

Difficulty in accessing allied health professionals means that GPs undertake additional work that they would prefer to refer on. The More Allied Health Services Program was developed to promote access to allied health professionals for people in rural and remote areas, and to share workload between GPs and other health professionals.

The authors have been unable to identify studies that indicate whether the retention of a critical mass of health professionals impacts on retention. However, a consultancy commissioned by the Commonwealth Department of Health and Family Services investigating the development of innovative models of sustainable rural and remote general practice services in Australia, identified using case study analysis, a number of sustainability criteria that related to the health service mix and health teams. The consultancy reported that the role, function and relationships of general practitioners and other health service providers in rural communities is critical to sustainable GP services. For nurses, allied health professionals and aboriginal health workers to effectively “share the load” they must be confident of support from local GPs and vice versa. Furthermore, the mix between aged care, acute health and community health services and community

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perceptions of these were essential to sustainability.\textsuperscript{77} This would suggest that the maintenance of a critical mass of health professionals with complementary skills and experience would assist in retention of the health team.

3.2\textbf{ATTRACTORS AND DETRACTORS TO RURAL PRACTICE AND TRIGGERS FOR LEAVING}

McDonald et al., (2002) conducted an evidenced based review of the literature examining the recruitment and retention of General Practitioners to rural areas, drawing on research published in 1990 or later (with the exception of seminal studies or frequently cited studies).\textsuperscript{78} This section will briefly outline the key findings of the review.

3.2.1 \textbf{PREDICTORS OF ENTRY INTO RURAL PRACTICE}

1. Having a rural background
   Sub predictors
   • Having a rural primary school education
   • Having a partner who grew up in the country
   • Having family living in a rural area
   • The view of one’s partner or spouse about living and working in a rural area

2. Undergraduate and postgraduate clinical experience in a rural practice
   Significant associations between further residency training in the country and:
   • Length of time in a rural hospital
   • Perception that previous rural hospital experience had enhanced theoretical knowledge
   • Belief that rural training has a positive influence on a future career in rural medicine
   • Expressed desire for a career in rural medicine

3. Other predictors
   • Being male
   • Being older
   • Australian born
   • Having a partner
   • Having children under 18 years

3.2.2 \textbf{PREDICTORS OF RETENTION}

There has been little research on predictors of retention in Australia. A longitudinal cohort study of Medicare data\textsuperscript{79} found that:

- Initial location was the best predictor of final location
- Most GPs remain in their initial practice for 5 years
- The more rural the location, the more likely GPs were to move
- Having an Australian qualification predicted both the initial choice of rural location and location after 5 years.

International studies indicated that:

- Rural background predicts current practice location more than five years after graduation
- Heavy workload, lower reimbursements and professional isolation is associated with considerations of leaving
- Rural physicians who move to the city generally do not return to rural practice
- Good match between the physician and their community predicts higher retention, as does greater community integration

McDonald et al (2002) presented a conceptual model of retention (see Figure 5), an expansion upon a model of Hays et al. (1997)\textsuperscript{80} that used a basic scale/balance analogy to represent the retention process. The balance is weighted by factors that are “Attractors” to rural practice and “Detractors” to rural practice. Factors impact on the domains of:

\textsuperscript{77} Monash University for Rural Health, University of Qld North Qld Clinical School, & Flinders University Rural and Remote Health Unit. (1998). Development of Models for Sustainable General Practice Services in Rural and Remote Areas. Canberra: DH&FS.


3.2.3 **Negative Factors influencing Retention**

**Professional Factors**
- Heavy workload – excessive after hours and on-call
- Lack of locum relief
- Professional isolation (including lack of peers, specialist support, geographical distance from peers and professional events)
- Low remuneration especially for after-hours and on-call
- Difficulty accessing CME

**Family and personal factors**
- Lack of quality schooling – and appears to overshadow all other factors in all sections
- Spouse unhappiness - lack of opportunities for spouses (employment and other areas)
- Isolation from family friends and cultural opportunities

**Community and resources**
- Lack of facilities – including schools, hospitals and medical technology, housing, social and cultural facilities
- Loss of privacy and anonymity
- Conflict with medical community e.g., hospital committees, staff and other doctors in town

3.2.4 **Positive Factors influencing Retention**

**Professional factors**
- Scope and variety of work
- Independence and autonomy
- Comprehensive/Continuity of care
- Procedural/hospital work

**Family and personal factors**
- Spouse and family happiness – close to family and friends
- Love of rural lifestyle – safety, clean environment, outdoor pursuits

**Community and resources**
- Sense of community
- Community appreciation
- Commitment to community
- Access to hospital facilities

3.2.5 **Triggers to Imbalance the Retention Scale**

Triggers are often the last straw for GPs weighing up the pros and cons of staying in rural practice. The triggers are identified as:
- Children reaching secondary school age
- Personality clashes with others in the medical community
- Hospital closures
- Changes in government policy

This model gives a clear picture of the problems and attractions of rural practice and identifies proven factors associated with leaving or staying in rural practice. This model assists in identifying where to target initiatives to increase the retention of GPs in rural communities.
**The Balance of Retention**

**Factors**

- **Professional**
  - Scope & Variety of Work
  - Independence & Autonomy
  - Comprehensive/Continuity of Care
  - Procedural/Hospital Work

- **Family & Personal**
  - Spouse & Family Happiness
  - (Close to family & friends)
  - Love Rural Lifestyle
  - Safety

- **Community & Resources**
  - Sense of Community
  - Community Appreciation
  - Commitment to Community
  - Access to Hospital

- **Predictors**
  - Prepared for Small-town Living
  - Well-matched to Community
  - Residency Rural Rotations
  - Well Integrated into Community
  - Highly Satisfied with Work
  - Attending a Rural Medical College
  - Participating in Selective Uni Program favouring rural background

**Triggers**

- Children entering secondary school
- Personality Clashes
- Hospital Closures
- Change in Govt Policy

- **Professional**
  - Heavy Workload
  - Professional Isolation
  - Lack of Specialist Support
  - Low Remuneration
  - Lack of Locum Relief
  - Difficulty Accessing CME

- **Family & Personal**
  - Lack of Quality Schooling
  - Spouse Unhappiness
  - Isolation

- **Community & Resources**
  - Lack of Facilities Hospitals/Schools Cultural & Social: Housing
  - Loss of Privacy & Anonymity
  - Conflict with Medical Community

**Predictors**

- Sharing on-call with only 1 Doctor
- Solo Practice
- Professional Isolation
- Low Reimbursement

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1. **Community Commitment**
2. **Medical Confidence**
3. **Compensation**
   (Pope et al., 1998)

**The Balance**

3.3 IMPENDING OR FUTURE SHOCKS

The previous sections have described historical factors that have contributed to the workforce shortage, and current supply side factors that continue to impact on the number of doctors working in rural and remote practice, as well as problems that are manifesting as a result of the workforce shortage. The development of viable solutions to meet rural Queensland medical workforce needs must seek to reverse, negate or address current supply side factors and manifestations of the problems of the undersupply of doctors. In addition, we must scan the Queensland and national environment to identify future shocks that must be managed and planned for to ensure that the models of workforce development are robust to meet current and emergent issues.

3.3.1 PROFESSIONAL INDEMNITY CRISIS

An impending shock that is impacting on the entire medical profession in Australia is the sharp rise in professional indemnity premiums, and the introduction of the Incurred But Not Reported (IBNR) levy to doctors previously insured with United Medical Protection. The rise in premiums is impacting through:

- Older doctors retiring early rather than continue to practice
- General practitioners ceasing procedural work. A survey of procedural GPs in NSW reported rising costs of indemnity cover and increasing fear of litigation, were reasons for GPs ceasing advanced procedural work within the next 5 years81
- Specialists ceasing private work and only working in public hospitals
- Specialists ceasing some aspects of their work that is considered to carry a higher risk e.g., Obstetrician & Gynaecologist ceasing obstetrics
- Reduction in complexity of rural based surgical services due to litigation concerns of visiting surgeons

3.3.2 SAFER WORKING HOURS

The provision of health care in the member countries of the European Union is now subject to the European Working Time Directive, which stipulates minimum rest periods, maximum weekly working time (48 hours inclusive of overtime), maximum periods of night work and patterns of work.82 In Australia, maximum duty periods for hospital-based doctors is 16 hours. The shortage of doctors in both the United Kingdom and Australia impacts on compliance with these work directives. However, lack of compliance has implications on patient care and indemnity for doctors.

Agencies employing doctors and nurses e.g., state health departments in Australia, must consider the safer working hours directives and implications on the rostering of Remote Area Nurses and solo Medical Officers in rural and remote communities. Clearly compliance with these directives would require changes to current models of service delivery in rural and remote Queensland. Furthermore, Australia continues to rely on importing doctors to meet service requirements in rural and remote areas, and will be impelled to consider such work time directives in order to compete with other countries that offer safer and more lifestyle friendly working conditions.

3.3.3 RESTRUCTURE OF QUEENSLAND HEALTH CLINICAL SERVICES

In 2002 Queensland Health launched the Smart State: Health 2020 Directions Statement,83 which provides a broad description of key directions for the Queensland Health system over the next 15 to 20 years. The Directions Statement has a number of objectives seeking to improve the health of Queenslanders in 2020. The objectives include:

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82 www.incomedata.co.uk/information/worktimedirective.htm#Article1
• Improving and strengthening whole-of-government approaches to address social, economic and environmental factors impacting on health and to encourage and enable healthy lifestyles and preventative health care

• Improve the health and wellbeing of the Queensland population by implementing targeted health strategies to address those areas of illness and injury, which offer significant health improvement opportunities

• Developing strong partnerships between individuals, communities, health services and the Queensland government to improve health and ensure a responsive community and client-centred health system

The Directions Statement also has five objectives for developing the health system of 2020. These include:

• Ensuring Queenslanders have access to appropriate, quality, integrated, patient-focused health services with the health system for 2020 developed around the principles of equitable access based on need, evidence and sustainability

• Developing a dynamic Queensland health workforce to provide quality care to the people of Queensland

• Ensuring Queenslanders have access to latest health technologies to enhance health and quality of life, consistent with building a sustainable health care industry and to build an environment for Smart State research and innovation in the health and biotechnology industries

• Ensuring Queenslanders have access to appropriate, sustainable health care services and that health care is provided consistent with the principles of good financial stewardship

• Supporting the health and wellbeing of the Queensland population as an important investment in the social and economic health of Queensland

With respect to the Development of the Health System, the Directions Statement flags but gives no specific detail on:

• Development and implementation of new models of care built around the principles of primary health care and care in the community

• Using communications and information technology including videoconferencing/telehealth, 24 hour health information lines, electronic patient records

• Building partnerships with health care providers across the continuum including public and private services, government and non-government agencies

However, the Directions Statement provides more detail about expected changes to rural health services. The document highlights that “maintaining viable health services requires medical practitioners to see sufficient numbers of patients with given conditions in a year. Insufficient patients do not maintain a doctor’s skills and can put patients at a greater risk of an adverse event.”

This sets the scene for indicating that new models of health service delivery for rural areas are likely to include smaller hospitals being “reshaped” as health centres, providing a range of collocated services from primary care, emergency care and residential aged care supported by networks around regional hospitals.

Emphasis is placed on developing special rural health workers including nurse practitioners, ambulance paramedics and allied health generalists to provide a range of services in rural and remote areas.

Establishment of partnerships between rural areas and provincial and metropolitan areas are identified to enhance capabilities of health professionals working in rural areas but there is no indication of how or in what form this would take.

Queensland Health Northern Zone has gone further in delineating proposed changes to the health system as set out in the Queensland Health Northern Zone Clinical Services Planning Framework. Queensland Health Northern Zone covers the region extending from Cape York and the Gulf of Carpentaria in the north to the coastal city of Mackay in the south, across to Mt Isa on the Northern Territory border.

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The proposed Northern Zone clinical system structure is described as a pyramid. The broad classification of clinical services levels is related to population bases. The five layers are:

- **Primary health care services**
  - < 3,000 catchment population
- **Integrated Rural Health Services**
  - 3,000 – 20,000 catchment population
- **District hub services**
  - >20,000 catchment population
- **Provincial referral hospital services**
  - >50,000 catchment population
- **Highly specialised referral services**
  - >500,000 catchment population

The first three layers are relevant to RRMA 4-7.

**Primary health care services**

The base or foundation layer is primary health care services provided to every community throughout the Northern Zone. The catchment population for these services is communities of less than 3,000 people. The primary health care services include:

- Disease prevention
- Health promotion
- Chronic disease management
- Post acute care
- Indigenous health care
- Community based rehabilitation
- Aged care
- Palliative care

The primary health care service will include some form of primary medical care (either a resident or visiting doctor) and will serve as a first point of contact and treatment/referral for medical emergencies. Hospitals in small rural communities will focus on the primary health care service model and will be “reshaped” into health centres as described in the 2020 document.

Putting this into context the catchment of Richmond, Hughenden, Julia Creek, Doomadgee, Mornington Island all have populations of less than 3,000, and all currently have 1 or 2 doctors, all employed as either Medical Superintendents with Right to Private Practice, Medical Officers with Right to Private Practice, or in the case of the remote indigenous communities Medical Superintendents and Medical officers. Each community currently has a hospital providing acute and inpatient care. Some of these doctors also undertake procedural work assisting visiting specialists.

**Integrated Rural Health Services**

The next layer of service, are smaller district hospitals and community health services with a catchment population between 3,000 and 20,000. In addition to the primary health care services listed above, services would also include inpatient care for medical patients who can be managed by a GP, and in some cases minor surgical activity (mostly day only). The level of surgery performed is limited by safety factors such as anaesthetic risk and post-operative care. Some integrated rural health services will perform low risk deliveries but this is expected to decline. Post-acute care will be provided to patients transferred back after specialist clinical treatment in other hospitals. The inpatient role also includes sub-acute care e.g., aged care assessment, rehabilitation, palliative care, and be closely linked with non-government service providers i.e., GPs, aged care services.

An example of towns that would come into this category include; Bowen, Ingham, Mareeba, Innisfail. The hospitals in towns in this category currently have hospitals staffed by Medical Superintendents and Medical Officers. The towns also typically have a number of private GPs who provide inpatient care and undertake procedural work including obstetrics, anaesthetics and surgery, and in some cases work on after-hours rosters with the salaried Medical Officers to support the hospital.

**District Hubs**

District hubs are larger rural hospitals and associated primary and community based health services, providing medical, surgical, obstetric, paediatric, rehabilitation and aged care services, with some specialist services provided locally or increasingly, on a visiting or outreach basis. They provide for most local admissions, some
referral services e.g., surgery and obstetrics and specialist primary care support including allied health services for smaller hospitals. District hubs service catchment areas of 20,000 to 50,000 people.

Innisfail and Thursday Island already are seen to function as district hubs. The Ayr, Charters Towers and Atherton Hospitals are identified as hub sites.

The Northern Zone’s rationale for this structural review is that without it the number of hospitals functioning as district hubs will diminish as a result of:

- Increasing specialisation of the medical workforce
- Fewer general physicians and surgeons practising in rural areas
- Fewer GPs willing to undertake procedural or anaesthetic work
- Growing shortages of specialist nursing staff (midwives, theatre staff)

3.3.4 Analysis of the Queensland Health System Restructure

Whilst the Smart State: Health 2020 plan has not been fully developed, and is not scheduled for release until June 2004, the Clinical Services Planning Framework developed by the Northern Zone gives detail to current thinking around restructuring of the Queensland health system.

Pros of the Proposed Re-structure

- Strengthening the provision of service based on primary health care principles is proactive but will need to consider the development of skills of nurses, indigenous health workers and allied health professionals to operate in the primary health care paradigm
- Seeking alternative strategies to provide health services in a climate of ongoing workforce shortages affecting medical, nursing and allied health professions
- Promoting the concept of health teams

Negative Aspects of the Proposed Re-structure impacting on the Medical Workforce Shortage

Whilst the Clinical Services Framework has been developed to deliver primary health care services and acute services in a climate of rural health workforce shortages, it is a high risk plan as elements of the re-structure are clearly identified triggers for doctors leaving rural practice.

The evidence-based review of recruitment and retention of rural medical practitioners conducted by McDonald et al., (2002) identified two of the four triggers for doctors leaving rural practice as closure of hospitals and hence capacity to deliver hospital-based care, and changes in government policy. The NSW Procedural GP survey indicated that if procedural medicine were no longer available in their practice 18% of procedural GPs would leave rural practice, 15% would move to another location offering procedural medicine, while 32% were unsure what they would do. This plan would particularly exacerbate workforce shortages in sites identified for Integrated Health Services where GPs are doing procedural work.

The de-skilling of procedural GPs in the Integrated Health Service Sites will place additional burden on the Medical Superintendents and Medical Officers undertaking procedural work. Some of the towns earmarked for this downgrading of service currently have shared on-call rosters with the salaried doctors, and they also provide back-up to the hospital when relieving medical staff do not have the procedural skills required to manage deliveries, road or other trauma.

Therefore, the implementation of this framework requires much stronger clinical support to Medical Superintendents and Medical Officers and mandatory requirement that relievers have the necessary procedural skills to manage emergencies. This means a significant re-think of the current composition and supply to the relievers’ pool used by Queensland Health Districts.

The primary health care services appear to be predominantly nurse-based services with visiting services by a GP/doctor. This model needs to be re-considered on a geographical basis. Under this model it is likely that there might only be one GP based along the Flinders Highway between Hughenden and Julia Creek, a distance of 250 km. How frequently will the GP service these communities of between 1,000 and 2,500 people?
Each community currently has the population to sustain 1 or 2 FTE GPs.

An empirical analysis of the relationship between rurality and the complexity of activities undertaken by rural doctors has shown that the more rural or remote the community, the more likely that the GP is regularly engaged in complex care, including critical emergency treatment using an expanded skill base. A survey of nearly 1,500 doctors in rural general practice RRMA 3-7, found that isolated rural and remote GPs manage myocardial infarctions to a higher level than GPs in larger rural and regional centres, are more likely to administer cytotoxic drugs, perform forensic examinations, stabilise injured patients pending retrieval, and coordinate discharge planning more often. The wide range of complex services provided by generalist rural doctors to their local communities ensures that patients have equitable access to medical services that are not otherwise available without travelling long distances to regional centres. Furthermore, the loss of critical medical services will inevitably reduce the health status and life chances of rural and remote residents.

There is a strong emphasis on the use of nurse practitioners in the Smart State: Health 2020 document. Will it be any easier to recruit Nurse Practitioners to rural and remote areas when they will have the on-call burden that doctors currently face and higher level of responsibility?

Does the Central Zone and Southern Zone intend to develop a similar clinical services planning framework based on population catchments? If so, in the Central Zone it would mean that in the Central West Health Service District, Longreach (currently staffed by 3-4 procedural GPs) would be downgraded to provide low risk obstetrics and little else. A Risk Assessment of Maternity Services was undertaken in the Central Highlands in late 2002. The recommendations from the review included, as a priority, that the District ensure that patients are informed of the relative risks of choosing to deliver at a facility without proximate access to emergency assistance. Currently there are 350 births per year at Emerald Hospital.

While the Central Highlands District has indicated that significant progress has been made in addressing the recommendations related to up skilling medical and nursing staff and the development of a roster to facilitate access to anaesthetic skilled medical staff, a priority recommendation was the provision of advice to patients of the risks associated with their pregnancy and the limitations in the capability of local services. These measures indicate a further contraction of services provided by Queensland Health in the Central Zone. Currently Emerald Hospital employs four full-time doctors, however, only the Medical Superintendent has obstetric qualifications. Strategies to support the continuation of procedural and obstetric services in these large rural communities need to be developed and implemented quickly to stem the loss of services.

Strategies required include active recruitment of medical officers with procedural skills to support the flying obstetrician and procedural GPs in towns such as Emerald, to ensure salaried doctors in these communities have obstetric and anaesthetic qualifications, and that relieving staff are also qualified in these procedures.

The proposed re-structure of the Queensland Health system would drastically change the face of rural and remote medical practice, with a high risk of exacerbating the medical workforce shortage particularly in the communities with catchments of 3,000 to 20,000 people. Other solutions and options need to be canvassed in conjunction with communities, local health professionals and community service providers to address medical, nursing and allied health workforce shortages rather than speeding up the negative spiral of rural decline.

3.3.5 There is Another Way

Recruitment and retention of health professionals can be improved as evidenced by the establishment of the

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North West Queensland Allied Health Service. The recruitment and retention strategies developed for this service were based on evidence provided by research that identified the reasons why allied health professionals leave remote practice, and developing a model of service delivery, and employment conditions that met their identified needs.86

This paper has described the factors contributing to the workforce shortage, and the professional and lifestyle factors that must be addressed in new models of rural general practice. Let’s not trigger a worsening of the medical workforce shortage and decline of rural areas by further downgrading of health services and facilities, but rather develop new solutions building on existing infrastructure. However, for this to occur, solutions need to be developed in partnership between state and commonwealth health departments, local government, rural workforce agencies, divisions of general practice, GPEA/GPET and ACRRM, nursing and allied health peak bodies, not one party working in isolation.

CHAPTER 4. REVIEW OF WORKFORCE RECRUITMENT AND RETENTION STRATEGIES

4.1 GENERAL PRACTICE

The evidence-based review of factors impacting on the recruitment and retention of general practitioners in rural areas conducted by McDonald et al. (2002), has critically commented on the quality of the evidence base of many of the Australian and international studies undertaken in this area. Particular mention is made of the range of strategies that have been introduced by government and funded agencies and the lack of easily obtained evaluations (if they have been undertaken) to determine the success of implemented programs. Whilst the reader may disagree with McDonald et al. (2002) with respect to the rigour of qualitative research, it is necessary to acknowledge that many of the recruitment and retention strategies that have been developed and implemented in Australia, have not been running long enough to determine effect on retention. With that rider, this section will document the range of strategies that have been implemented over the last 10-15 years, and review the impact as information currently stands.

4.1.1 OVERSEAS TRAINED DOCTORS

As indicated in the previous section, overseas trained doctors have been recruited to fill workforce shortages in Australia, Canada, United States and the United Kingdom, and make an essential contribution to rural areas. In Australia, higher proportions of male GPs who initially trained in the United Kingdom, Ireland or South Africa make up the bulk of OTDs practising in rural areas, but more than 80% of OTDs have a desire to practice in capital cities, which is reflected by low retention for all OTD groups in rural areas with the exception of those originally from the United Kingdom.

In a cohort study conducted between 1985 and 1988, it was found that of the 429 OTDs who entered general practice, 91 practised in rural areas, and after 5 years, 71 (78%) of those OTDs were in rural practice, which was considered a satisfactory retention rate. However, since the time of this study, immigration restrictions have been imposed with provider numbers linked to areas of need. Therefore, the retention of current overseas trained doctors in rural areas could look quite different, as these doctors have little choice in where they work.

In 1999, the Federal Minister for Health and the State Health Ministers announced a new program - the 5-year program (known as “Docs for the Bush” in Queensland) targeting TRDs. The scheme was designed to recruit doctors to work in hard to fill rural and remote locations by offering permanent residency and unrestricted provider number after 5 years service and attainment of the FRACGP within 2 years.

The first cohort of “Docs for the Bush” will be finishing their period of indenture in 12-18 months time (around the latter part of 2004). A national evaluation of the 5 year program funded by the Commonwealth Department of health and Ageing, commenced in September 2003, but will not be reported until early 2004. In the interim, the QRMSA has undertaken a series of interviews with the Queensland cohort in order to facilitate future workforce planning (i.e., identify intentions to remain or leave communities), and identify strengths and weaknesses of the program in order to improve the program and promote retention of doctors.

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In Queensland, the “Docs for the Bush” program was initially managed by QRMSA, including the initial recruitment of doctors to the program, however management was transferred to Queensland Health in February 2002.

There are 19 remaining “Docs for the Bush” practitioners in Queensland the majority of these are doctors working as MSRPP’s or MORPP’s. Semi-structured telephone interviews were conducted with doctors on the program, by the Medical Advisor, QRMSA. The questioning route sought to identify:

- Reasons for applying for the “Docs for the Bush” program
- Expectations prior to entering the program, and whether they were met
- How they settled into their community?

**Support structures**
- Initial support received from QRMSA and from Queensland Health
- Access to suitable training programs
- Support/suitable leave to attend training programs/prepare for exams
- Access to professional support (such as peer support networks)
- Access to personal support for themselves and their family e.g., QRMFN, rural Divisions
- Access to suitable orientation material/support prior to entering the program
- Has the doctor completed the fellowship exam?
- Identification of strengths and weaknesses of the program
- Rating of overall experience of the “Docs for the Bush” program

**Future intentions**
- Intentions for the future
- What would it take for the doctor to remain in rural practice?

**Improvements to the program**
- Systems that could have been put in place to make the experience easier
- Improvements to be made to the program

**Key points arising from the interviews**

The interviews have provided some valuable information that can be used to improve the “Docs for the Bush” program.91

Doctors entered the “Docs for the Bush” program for the purpose of obtaining permanent residency and unrestricted provider number access. The expectations of the program and placements were variable with some doctors having little expectation of support and some expecting a lot more support, particularly with respect to information about where they were posted (for self and family), and preparation for the FRACGP exam, which was a condition of entry into the program.

The majority of doctors indicated that they found it easy to settle into their communities, with only two finding it hard.

In terms of initial support, 11 of the 19 (58%) felt they were given suitable orientation and support by QRMSA when they entered the program. Six doctors reported receiving little or no suitable orientation, with several expressing being unprepared for the remoteness of the communities they were assigned to. However, ongoing support from Queensland Health was identified as problematic i.e., poor or very poor by two thirds of the respondents – with the main concerns being lack of contact and lack of peer support.

Seventy four percent of the doctors had difficulty in accessing suitable training programs to assist them prepare for the fellowship exam, but the majority were able to obtain leave for examination preparation. Those doctors having difficulty accessing educational support cited problems with locum cover and heavy workload impacting on time for study.

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Whilst family support programs are offered by the Queensland Rural Medical Family Network (QRMFN) and the rural Divisions, less than half felt that their families had access to suitable support services, and more than half (58%) indicated that they were not able to access any family or personal support.

The strengths of the program identified were:

• It provided doctors with a pathway to permanent residency, and five year reduction of the moratorium on unrestricted provider numbers
• It provided doctors to remote areas
• Improved continuity of care in these locations
• QRMSA support network in the early stages
• Good/challenging work leading to improved knowledge and skills (1 response)

The weaknesses of the program were:

• Lack of access to suitable training programs and professional support (including links with other medical professionals in similar situations)
• Commitment too long, suggested weighting indenture proportional to remoteness
• Management of the program and level of support/interaction was reduced once operation changed from QRMSA to Queensland Health
• Program is too inflexible if a doctor has a problem with a community or vice versa

NB. An observation made by the author is that some sectors of Queensland Health tend to perceive the MSRPP positions to be private GPs providing outpatient and hospital services (in and out of hours) to a community for Queensland Health and the contract is considered a “retainer”. This is in comparison to Medical Superintendent or Medical Officer positions (without right to private practice), who are considered “full-timers” and employees of Queensland Health, paid on an overtime basis to provide after hours services. This may help to explain some of the perceived management issues identified in this study.

Of the doctors interviewed 11 of the 19 doctors (58%) indicated that they would leave their current location at the end of the program, with most wishing to move to a larger centre to be closer to professional support and facilities. Six doctors (32%) intended to remain in their present location.

The doctors identified three areas that could be improved to encourage medical practitioners to remain in rural practice. These included:

• Financial incentives and practice sustainability, including provision of adequate facilities such as housing, equipment and practice premises to make practice more financially viable
• Adequate locum provision (availability and quality) and professional support
• Community sustainability and access to quality schooling and community resources

Results from the survey indicate there is some dissatisfaction with the current levels of information provision and communication on this program. Participants require clarification of systems and processes and a greater level of information provision regarding the complexities of Medicare, HIC and immigration procedures. Furthermore, it is evident that participants would like to see a formal system of networking established between doctors on the “Docs for the Bush” program, even the production of a newsletter would be welcome.

Education support is an area that has caused the most dissatisfaction amongst participants. While the Divisions of General Practice have been able to provide some support, the establishment of some form of formal mentoring program that concentrates specifically on examination preparation seems necessary.

While the majority of participants indicated that they enjoyed their experience, the fact that over half intend to relocate to a less remote area or are undecided on whether to stay in their present locations, clearly demonstrates that there have been some failings in terms of the “Docs for the Bush” aiding in the retention of rural medical practitioners.

4.1.2 LOCUM RELIEF

Lack of locum relief is a well-documented disincentive to rural practice. The national Rural Locum Relief Program was introduced in 1996 by the Commonwealth government and is now administered by the Rural Workforce Agencies. The program enables doctors (otherwise not eligible to access Medicare) to do locum work through a structure that provides adequate backup and support arrangements. Since the
1996 limitation on provider numbers for medical practitioners, there has been an increase in the supply of doctors registered under the Locum Relief Program.

The Queensland Rural Medical Support Agency is responsible for the administration of the Rural Locum Relief Program in Queensland, as part of its contract with the Department of Health and Ageing. The rural workforce agencies in the other Australian states have similar responsibility. On average the QRMSA processes approximately 100 applications and renewals for the Rural Locum Relief Program each year, and at September 2003, there were 44 doctors on the program in Queensland. Despite its name, the RLRP program is more a longer-term placement strategy. In addition, QRMSA is also a major supplier of short-term locums to doctors in private rural practice, and can have difficulty having sufficient numbers of locums during holiday periods. The cost of providing locum relief in rural areas is expensive due to the high travel and accommodation costs in addition to salary costs.

4.1.3 ACCESS TO CONTINUING MEDICAL EDUCATION

Poor access to appropriate CME was demonstrated to be a significant barrier to the retention of rural general practitioners. A key plank in the General Practice Rural Incentives Program of the Commonwealth government was the provision of support for GPs to access relevant ongoing medical training. The provision of CME is undertaken by a range of organizations including the rural Divisions of General Practice, Rural Workforce Agencies, the Australian College of Rural and Remote Medicine and the Royal Australian College of General Practice. It is recognized that access to CME can be problematic for rural GPs due to professional isolation, heavy workload and lack of locum relief.

In the development and delivery of CME, the CME providers have developed a range of methods for delivery including electronic technology. However, evaluations undertaken in the early and late 1990's showed that rural GPs continue to prefer interactive learning methods, rating case discussion, case-related contact and conferences as the preferred methods. Evaluations of CME programs in Australia have focused on participation, awareness and attitudes.

The effects of CME and locum programs on recruitment and retention have been difficult to evaluate as these programs are often delivered as a “package” or suite of packages to support rural and remote doctors. However, it is clear that locum coverage and access to relevant, high quality CME are important components contributing to the retention of doctors in rural and remote areas.

4.1.4 FINANCIAL INCENTIVES

As part of the Federal Budget in 1992-93, a comprehensive package was introduced to increase the recruitment and retention of GPs in rural areas (The General Practice Rural Incentives Program). The package included relocation incentive grants, training grants, remote area grants, undergraduate rural support grants, and rural CME and locum support grants. Process evaluation showed that the GPRIP program appeared to influence where GPs would practise, but there was no longer-term evaluation to determine impact on retention.

In the 1999/2000 Federal Budget, the Commonwealth launched the GP Rural Retention Program which was intended to reward the contribution of GPs that had practised in rural areas and encourage them to remain. In 1999/2000 the program made payments of

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96 Wells R. (2002). Medical workforce supply in under-serviced communities – Australia 5th International Medical Workforce Conference, Sydney, Australia.
$19.6 million to 1,640 GPs, with the size of payments based on physical remoteness, access to services and access to peer support. The formula upon which payments are based consider the degree of remoteness, and period of service in an area. As an example a doctor working in a remote area RRMA 7, qualifies for a payment after 1 year, while a doctor working in RRMA 4 qualifies for a payment after 6 years. The annual payment is 5 times higher for doctors working in RRMA 7 (currently $25,000 per year after the qualifying period), compared to doctors working in RRMA 4 ($5,000 per year after qualifying period). Whilst this program has been evaluated internally within the Commonwealth Dept of Health and Ageing as part of a financing review, and will continue in its current form until 2007, it has not yet been evaluated with respect to impact on retention.

The number of GPs practising in rural areas is increasing. However, due to the range of programs operating it is difficult to attribute whether financial incentives are an influencing factor.

### 4.1.5 Funded Student Scholarships

Funded student scholarships or bonded scholarships provide financial support to medical students and other health professional training, with students required to practice in rural or remote areas for a specified period of time following graduation. In the United States, the National Health Service Corps has placed 15,000 physicians in rural and underserved areas at a cost of more than $2 billion in scholarships. For each year of financial assistance received, students incur one year of obligated service. A number of large-scale longitudinal cohort studies of this program showed that the scholarship program supports the recruitment of doctors to underserved areas, however retention of obligated GPs is less than non-obligated GPs, with obligated doctors having lower morale and lower work satisfaction.$^{97}$ The scholarships have provided a period of service to rural and remote communities. However, it is important for the doctor’s well being that he/she has a satisfactory work and personal experience whilst working in rural practice. The concept of bonding is not viewed favourably by the Australian Medical Association, or the GP Registrars Association. The effectiveness of this scheme as a mechanism of addressing workforce shortages in Australia requires evaluation.

### 4.1.6 Rural Background and Rural Placements

Student admission programs involve the preferential selection of students with a rural background into medical courses. The rationale is that students with a rural background are more likely to practise medicine in rural areas compared to urban students. University policies were introduced in Australia in 1992 as a component of the General Practice Rural Incentives Program to establish a quota for admissions of rural students into medical courses. The program has been operational only a short time therefore the impact on recruitment and retention to rural practice has not yet been determined.

Studies from the United States indicated that physicians from a rural background were more likely to practice in rural or under-served areas, and that long-term retention was high. Furthermore, providing a rural placement during medical schooling had a cumulative effect on recruitment and retention in rural areas.$^{98}$

In Australia, Wilkinson et al., (2003) reported a national case control study of 2,414 rural and urban GPs. This study showed that undergraduate rural training, postgraduate training and medical school entry criteria favouring rural students, were associated with an increased likelihood of being a rural GP. Longer rural postgraduate training was also found to be more strongly associated with rural practice. The authors argue that these findings support the continuation of rural undergraduate training opportunities and rural


entry schemes, and an expansion in rural postgraduate training opportunities for GPs, since doctors with more than half their postgraduate training in the country are about 10 times more likely to become rural GPs than those with no rural postgraduate training.99 The regionalization of the GP training program should increase opportunities for rural GP training.

4.2 Recruitment and Retention Strategies in Other Professions

The project team has undertaken a review of recruitment and retention strategies that have been employed by other professions to meet rural workforce needs. Information was collected from brochures, reports and other documentation relating to the:

- Teaching profession
- Mining industry
- Nursing profession

4.2.1 Teaching

State and Territory education authorities have implemented a range of recruitment policies and practices to attract people to the teaching profession. The focus of activities differ somewhat, but they have the same common goal - to attract trained teachers to fill immediate vacancies in schools; and to attract and support people to qualify as teachers to meet future demand.

Attached to such recruitment campaigns is a range of supporting mechanisms, financial and employment incentives to assist prospective teachers through their training and preparation. For example, the Victorian Teaching Scholarship Scheme supports students to become qualified and teach in government schools through the provision of cash payments of $3,500 and guarantees of ongoing employment in Victorian government schools.

While these generic campaigns and support activities attract sufficient numbers of teachers overall, it appears that different and targeted recruitment strategies may be required to attract teachers of science, technology and mathematics. These have included:

- Targeting professionals currently employed in other areas
- Targeting mature age workforce
- Targeting mid-career workforce, using training wages and payment of course fees coupled with guaranteed placement in a school at a salary above beginning teacher level as a very effective in attracting mid-career professionals.
- Targeting final year university students offering pre-service scholarships to support students to become teachers of science, technology and mathematics, including covering Higher Education Contribution Scheme (HECS) liabilities, the provision of a training allowance and guaranteed appointment for a minimum three years to a school in a specific geographic area.
- A large source of potential teachers are immediate school leavers. The New South Wales Department of Education and Training offers scholarships to encourage students to become teachers of technology, with a commitment to accept an appointment to a school in specific geographic areas.

School leavers are also a potential teaching source for rural and remote communities—a ‘grow your own’ approach has merit because some individuals who are already members of a community are likely to return and remain there after they become teachers. The Association of Heads of Independent Schools recommended that schools should offer scholarships, have scholarship holders undertake their professional experience at the school, and guarantee employment on successful completion of their course.

Migrants are another potential source of teachers. It is estimated that there was an annual average of 2,244 migrants with teacher qualifications entering Australia between 1998 and 2000. The Australian Education Union recommended ‘the provision of intensive, high quality language and system-orientation courses for

potential recruits from overseas with appropriate qualifications”, as well as facilitating the re-entry of Australian teachers who had been recruited to work overseas.

There are a range of strategies to support recruitment and retention of teacher to rural areas. Some strategies promote exposure to rural service, others relate to financial incentives including bonded scholarships, transport and accommodation subsidies, relocation assistance, retention payments, low interest rate loans to build a house in a rural community, professional development including sabbaticals, rural placements of experienced teachers with financial incentives and guaranteed placement back to origin position.

The Queensland Remote Area Teacher Education Program recognises the assertion of many studies that a key factor in the attraction and retention of teachers in rural and remote areas is the recruitment of trainees from these areas, as well as the recruitment of indigenous staff.

According to research, nationally, cash incentives seem to be better at retaining teachers than attracting them, however, they are only marginally effective at this. Social and professional conditions are often seen as more important. Cash incentives are taxed so some states (Northern Territory and Queensland) give people options on how they can collect these benefits.

New attitudinal changes and career participation expectations are part of the changing pattern of the workforce. An emerging theme is that the post 1970-generation, now aged in their late twenties, early thirties is actively shaping flexible careers. While they value the concept of a career, less of them connect a career to the traditional idea of a single full time permanent job for the term of a working life. They see jobs and careers as vehicles for advancement, that involve commitment and that offer personal fulfillment. Clearly this has implications for the way in which teachers will be developed and deployed within schools as they progress professionally. Many assumptions, including models of teaching as one career and a career for life, through to retirement, need to be re-considered in workforce planning.

4.2.2 MINING AND TECHNOLOGY INDUSTRY

Skills shortages typically occur in areas requiring specialized and experienced workers and can coexist with relatively high unemployment levels. Shortages may persist because the underlying cause is structural and resolution of the structural issue is a precondition to the resolution of the skill development issue.

Reasons for skills shortages have been identified as:
- Low level of industry involvement/support;
- Existing curricula not well targeted;
- Perceived unattractive working environment in mining;
- Poor career prospects; and
- Limited funding to education limits flexible response to industry needs.

The mining and technology industry is trying to meet shortages in science/technology graduates by directly supporting school and university programs and employing overseas expertise. However it recognizes that for the mining sector to grow and directly benefit Australia’s socio-economic situation, it needs access to highly skilled Australian graduates and greater input from industry into the direction higher education is taking. Programs such as the Australian Student Mineral Venture Program and Science in Schools are beginning to address this issue but there is still a need to reach a wider student audience.

The mining industry recognizes the transient nature of employment in today’s society, requiring industry associations and educational bodies to take a greater role in supplying inter-company training packages for industry. For example the National Mining Industry Training and Advisory Board (NMITAB) has overseen the development of a number of industry training packages that offer recognition of a wide range of competencies and nationally recognized qualifications.

Nationally, pressures for more skilled employees in the sector can be alleviated in the short to medium term through encouraging skilled migration of foreign workers. The temporary employment of skilled international technicians to work on mineral projects is also an option being used. One mechanism to allow timely entry of highly skilled people from the Asia-
Pacific region has been the APEC Business Travel Card, which expedites the visa process potentially avoiding costly delays in projects.

4.2.3 NURSING

There is limited research about the impact of new and emerging service models on nurses. What is clear is that changes in the way health care is provided can have both negative and positive impacts on nurses.

Research does suggest that nurses are happy to work in models offering:
- Nurse leadership which is visible and supportive of staff
- Autonomy in practice
- Status for nurses within the organization
- Collaborative work arrangements and
- Participative management

Models without these features are likely to have difficulty in attracting and retaining staff. Some recruitment and retention difficulties could be overcome if those involved in planning and developing new service models ensured the design included features such as these.

Despite the vital importance of nursing services in rural and remote areas, the financial incentives for nurses to work in geographically isolated areas are generally poor. This situation is likely to worsen. While income is not seen as the major factor in influencing rural and remote area nurses decisions to stay, it is unlikely that major increases can be achieved in recruitment of nurses to rural and remote areas without an improvement in salaries. Good financial incentives, for example those offered by Queensland Health and Nganampa in South Australia, have succeeded in attracting more nurses into remote areas and increased length of stay. However, the distinction needs to be made between the packages offered to remote area nurses at solo postings, and the less generous conditions offered to hospital-based nurses working in rural and remote areas, where there continues to be considerable difficulty recruiting and retaining hospital nursing staff.

Inadequate workplace environments continue to be a major issue for rural and remote area nurses and this impacts on retention rates. Improving the workplace environment to deal with these issues is an important aspect of retention strategies.

- Lack of resources, equipment and facilities: Many rural and remote health settings lack the resources to deliver the service in keeping with consumer and employee expectations. This creates frustration, compromises professional standards and in some instances reduces the quality and access to care.

- Flexible employment models: The availability of part-time or flexible working hours is quite limited, yet the vast majority of the nursing workforce is female. Innovative approaches such as formal partnering between remote areas and regional centres can offer greater flexibility for nurses and some relief from the day-to-day pressures of being located in a remote area.

- Appropriate and quality accommodation. Quality housing is difficult to obtain in remote areas of Queensland, requiring the provision of accommodation by Health Service Districts. Accommodation in most rural and remote communities continues to provide only single accommodation, requiring the provision of married accommodation is a strategy to attract older nurses to work in rural and remote areas for periods of time.

There is scope to introduce models of employment that enable nurses to move between the bush and metropolitan areas without suffering penalties. One such model exists in Alice Springs, where nurses are employed by the hospital and remote services and move between the two. This model provides nurses with an alternative to seeking short-term contracts in both settings to maintain an annual income.

- Reliable relief mechanisms: Demands on rural and remote area nurses can be excessive and extremely invasive of personal time. Approximately one third of remote area nurses are on call for more than 50 hours a week.
Provision of relief and locum services, especially, but not only for remote area nurses in single nurse posts is inadequate.

Other initiatives currently being examined include:

- Scholarship programs of students
- Professional support
- Improved continued education support and skills development
- Risk management structures
- Family/childcare support
- The development of mentor networks
- Improved communication networks between professions
- Implementing a system of supports for rural nurses with urban backgrounds

4.2.4 SUMMARY

There are many similarities in the strategies to recruit and retain doctors, nurses and teachers to rural and remote areas. However, differences exist between these professions in that nurses and teachers are employees. In Queensland, doctors in remote areas (RRMA 7) are usually salaried and may or may not have right to private practice, whilst doctors in RRMA 4-6 will include salaried and private general practitioners. This distinction is important with respect to financial incentives.

Recruitment strategies used in the teaching and medical profession, are now focusing on rural background, rural placement during training, and bonded scholarships. The teaching profession employs interesting models to support quality management in rural and remote schools with the professional exchange program, and temporary (2-3 years) rural appointment of experienced teachers.

Whilst financial incentives continue to be used as a retention strategy in each profession, it appears that support structures are crucial to retention, including relief, professional development, appropriate working environments and housing. Perhaps the strongest retention strategies will be those that support changing work patterns, and provide flexible career paths, ensuring professional and family/personal needs are met.
CHAPTER 5: CURRENT MODELS OPERATING IN AUSTRALIA

5.1 AUSTRALIA’S HEALTH SYSTEM

The Australian health system is a complex mixture of public and private services operating across the 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 through aboriginal community controlled health services, and aged care through the Community Care Aged Care Packages.

The Commonwealth has extended its role in directly funding service provision through a range of initiatives since the 1990s. In 1993/94 the Commonwealth government funded the Divisions of General Practice Program, and whilst it initially did not directly fund health service provision, this has changed in recent times with initiatives such as the More Allied Health Services Program, and the Practice Nurse Initiative, which are predominantly targeted to rural and remote areas RRMA 3-7. The Commonwealth has allocated significant funding to enhance the provision of primary health care services in rural and remote areas through the Regional Health Strategy, and multi-purpose health services in partnership with state health departments. In addition, the Commonwealth has sought to improve access to medical specialists in rural and remote areas through the Medical Specialist Outreach Assistance Program. The Royal Flying Doctor Service provides GP clinic services to numerous sites in remote communities, and also auspices the Commonwealth funded Rural and Remote Women’s Health Service, providing female GP services to rural and remote communities.

State and Territory governments have the major responsibility for the public provision of health services, and 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 including acute care, admitted patient services, outpatient clinics, emergency care, psychiatric care (acute and admitted patients)
- Community based mental health services
- Dental health services, including school dental services
- Infant health centres
- Health promotion and prevention
- Community health services
- Ambulance services
- Home and Community Care (HACC) for frail aged and disabled (funded Commonwealth and State 60:40)

State and Territory governments are also responsible for regulation, inspection, licensing and monitoring of premises, institutions and personnel.

The health responsibilities of local government vary from state to state, but are mainly involved in environmental control and community based and home-care services e.g., Local government may auspice and manage HACC services. Piped water, sewage disposal and drainage are controlled by local government or by state-owned or local government-owned water utility corporations.

5.2 PRIVATE GENERAL PRACTICE

The traditional model for provision of general medical services in rural and remote Australia has been self-employed GPs seeing patients in a private, community based surgery usually on a fee for service basis, funded largely by the Health Insurance Commission (HIC) through Medicare. This is supplemented by varying levels of private billing dependent on local issues including socio-economic status of the community.

The GPs provide Visiting Medical Officer (VMO) services to the local hospital, are usually remunerated on a fee for service basis according to state agreements (e.g., The Rural Doctors Association – NSW Health Agreement - the RDA Settlement Package). The services provided include in-patient and out-patient services both in and out of normal business hours. Some states now subsidize medical indemnity costs for procedural
work undertaken on Medicare patients in public hospitals. However, there is the risk that this may provide an incentive for state health authorities to reduce procedural services in small rural hospitals.

Community-based general practice in rural and remote areas is thought to be significantly cross-subsidized by VMO fees, to the extent that bulk-billed practice is not financially sustainable in the absence of hospital VMO cross subsidy. The Rural Doctors Association Of Australia Viable Models Project identified that in a sample of general practices in RRMA 3-7, 10% of total practice income was derived from hospital services, and 11% from the Practice Incentives Program. Seventy nine percent of income was derived from fees, of which 37% were bulk billed.100

A feature of the Queensland system is the Medical Superintendent/Medical Officer with right of private practice (MSRPP/MORPP) model. Under this model, medical officers are contracted on a retainer basis by Queensland Health to provide some out-patient care, inpatient and emergency care. They can also operate private practices and provide and bill services through Medicare. Services are usually bulk-billed due to the reduced patient capacity to pay, as well as the fact that the patient can see the doctor as an outpatient at the hospital and not be charged. The MSRPP/MORPP arrangement tends to be more common in smaller and more remote communities with approximately 70 Queensland Health employees providing private practice services in Queensland. This arrangement is not common in other Australian states other than in some locations in northern West Australia.

While the MSRPP/MORPP arrangements appear to work reasonably well, they do reflect subsidized competition for other private practitioners in multi-doctor communities. The MSRPPs/MORPPs' contracts include a retainer for services provided, accommodation, vehicle, and supportive hospital infrastructure. They also have the right to operate a private practice. In such a marketplace, it is often very difficult for a private practitioner to compete bearing in mind establishment and insurance costs and the well-documented difficulties in establishing or selling practices in rural and remote locations.

The majority of rural doctors live in the town they service, and have made a significant capital investment by purchasing their own house and surgery, managing the practice as a small business. They are responsible for ensuring the practice is appropriately resourced (staff and equipment), and are responsible for all aspects of business management.101

5.3 Visiting Medical Officer Models

In addition to the employment of fulltime salaried medical practitioners in hospitals, all state health departments in Australia utilise a Visiting Medical Officer system whereby medical services are also provided by private practitioners engaged as Visiting Medical Officers (VMO’s) either on a fee-for-service or sessional basis. This arrangement became more common following the establishment of Medibank (now Medicare) by the Commonwealth government in 1975. Prior to this time, part-time medical staff were engaged by hospitals on an honorary basis to treat public patients without charge to either the patient or the hospital.102

Under the fee-for-service system, VMOs are paid by public hospitals for each medical service provided for public patients. This method of payment is similar to the system used by private practitioners to directly bill Medicare for services provided outside the public hospital network. Under the sessional system, which is effectively a time-based system, hospitals employ VMOs to attend public patients for specified periods. The provision of medical care outside agreed sessional

100 Rural Doctors Association Australia. (2003). Viable models of rural and remote practice. Stage 1 and Stage 2 report. Canberra: RDAA.
hours is generally covered by the allocation of additional sessions on an on-call basis.103

In many rural and remote communities throughout Australia, General Practitioners are appointed as VMOs to the local hospital. While not a common feature of the Queensland Health system, in other Australian states, local GPs provide all medical services for the hospital in the absence of full-time salaried medical practitioners. The additional income derived from a VMO appointment often makes it easier to attract and retain medical practitioners in rural and remote communities. In more recent times, in some NSW locations the “cashing out” of VMO services has been negotiated to provide some stability in income with participating doctors receiving a guaranteed set of income for each 24 hours they are on call.104

While Queensland utilizes the VMO model, it does so to a far lesser extent compared with other states. It also tends to utilize sessional arrangements rather than fee-for-service arrangements. The more common arrangement in the Queensland Hospital system is for Queensland Health to employ full-time salaried medical officers in the facilities it operates. The major exception is Longreach whereby local General Practitioners have contracted to Queensland Health to provide medical services to the local hospital. The employment of full-time medical staff by Queensland Health in its hospital facilities tends to ensure that VMO arrangements are less utilized and local GPs have less opportunity to generate additional income.

5.4 RFDS CLINICS

In Queensland the RFDS undertakes general practice clinics to identified remote communities where there is not a resident doctor, as well as clinics on properties. The doctor is usually accompanied by a nurse. The frequency of the clinic and duration is dependent on the size of the community. The clinics are funded through a combination of Commonwealth and State funds.

In Cape York the RFDS has instituted a new model of service provision to a remote community to enable the placement of a fulltime doctor. In Kowanyama the RFDS has two doctors sharing the full-time position on a fortnightly rotation.

5.5 COMMUNITY CONTROLLED HEALTH SERVICES

Community Controlled Health Services usually operate in indigenous communities or centres where there is a large Aboriginal and Torres Strait Islander population. An Aboriginal community Controlled Health Service (ACCHS) is a primary health care service initiated by local Aboriginal communities to deliver holistic and culturally appropriate care to people within their communities. Their Board members are elected from the local Aboriginal community.

Aboriginal communities around Australia have been establishing such services since the early 1970s in response to a range of barriers inhibiting Aboriginal access to mainstream primary health care services and, as an expression of self-determination.

Aboriginal Community Controlled Health Services are usually staffed by one or more general practitioners, nursing staff and indigenous health workers. Aboriginal Community Controlled Health Services receive operational funding from the Office of Aboriginal and Torres Strait Islander Health to provide core services. These are generally in nutrition, child and maternal health, hearing health and social and emotional wellbeing, dependent on the needs of the local community. Some services are specifically funded to provide GP services while others generate funding for GP services through Medicare. In the Aboriginal Community Controlled Health Services, provider numbers are linked to the service rather than the individual doctor; therefore HIC payments go directly to the health service. Doctors are usually employed on a salaried basis by the service, or paid on a sessional basis.


CHAPTER 6: ADAPTATIONS OF EXISTING MODELS TO ENHANCE SUSTAINABLE RURAL AND REMOTE PRACTICE

The scoping exercise reported in the previous sections demonstrated the complexity of issues that have contributed to the current shortage of doctors in rural and remote Australia. Federal initiatives have been instigated to increase medical training places, and opportunities for undergraduate and postgraduate training in rural areas, but these are long-term solutions. The Queensland Rural Medical Support Agency must develop a range of models that can be applied in the short-term, as well as models requiring a longer lead-time.

6.1 PLANNING MATRICES

The previous sections have informed the development of a planning matrix to identify the core components that the Queensland Rural Medical Support Agency can use to undertake further modeling to support sustainable rural and remote medical practice. Two matrices have been developed. The first identifies the core components required to support the professional factors for rural doctors as well as some possible strategies. The core components include recruitment, employment conditions, practice viability and support, relief and peer support, continuing medical education and training, and specialist and other health professional support. The second matrix identifies the core components to address family and community factors as many of the core components to support family factors also apply to the community. Many of the components identified in the matrices could also be applied to other health professionals.

The y-axis of the matrices sets out the ‘level’ at which components could/should be addressed i.e., national, state, regional and community. In developing the matrices, the project team has notionally identified state responsibilities to QRMSA and Queensland Health, and regional responsibilities to networks such as the Divisions of General Practice. Responsibilities at a community level have been identified as local government, community members, and community organizations. The detailed planning matrices are described in Appendix 1.

Whilst locally tailored solutions or models of practice are required, it is necessary to keep in mind that these must be developed against a backdrop of:

• Younger doctors seeking a better balance between family life and work life
• A reduction in the number of doctors choosing general practice
• Shortage of doctors impacting on the availability of junior doctors to staff hospitals and provide relief (although it is queried whether the current rural relieving model is appropriate to remote practice)
• An ageing general practice workforce, and whether alternative career paths can be developed to maintain the skills of these practitioners in rural areas
• Tensions between the standards set by the specialist colleges, costs associated with maintaining procedural professional development points, and relief required to undertake skills maintenance, and current medical indemnity premiums impacting on doctors continuing to provide procedural services
• Increasing female participation in the general practice workforce and requirements for flexible hours and work practices to meet family commitments
• Development of the concept of multidisciplinary health teams promoting integrated health care and opportunities to work smarter not harder

Furthermore, the continued reliance on TRDs for the provision of medical services in rural and remote Queensland in the short to medium term requires specific consideration in the development of support strategies as part of the overall solution.
There has been significant activity over the last 3-5 years in the development of models to support rural and remote medical practice. These have included:

- Models of Sustainable Rural and Remote General practice Services: A Dream Come True? Consultancy commissioned by the Commonwealth Dept of Health and Family Services, 1998, undertaken by a consortia comprised of the Monash University Centre for Rural Health, University of Qld North Qld Clinical School and Flinders University Rural and Remote Health Unit
- Easy Entry, Gracious Exit Model, developed by the NSW Rural Doctors Resource Network in North-West NSW and funded by the Commonwealth Department of Health and Ageing, 2003
- Viable Models project undertaken by Rural Doctors Association Australia and funded by the Commonwealth Department of Health and Ageing

The development of the planning matrices highlighted that local models or solutions must be underpinned by policies and strategies at a national and state level with respect to recruitment of Australian and overseas trained doctors, development of practice support initiatives including electronic records, professional indemnity reform, recognition of higher costs associated with rural practice, expansion of the role of support personnel including practice nurses, provision of adequate and quality locums, flexible training and professional development to support the complexity of rural and remote practice, and development of health teams to extend primary care service delivery.

6.2 Adaptation of Existing Models to Improve Sustainability

In developing solutions to support rural and remote general practice in Queensland, it is obvious that one size does not fit all. The project team undertook a compilation of models currently operating in Australia, and developed adaptations to enhance sustainable service delivery. The strategies have potential application to specific geographical and demographic characteristics.

These strategies have particularly focused around practice ownership and management, reducing the burden of after hours, and mechanisms to increase the critical mass of doctors to continue to provide a range of procedural and primary care services, addressing identified factors contributing to poor recruitment and retention, and sustainable practice.

The strategies were presented, critically appraised and revised at a workshop (The Townsville Workshop) with representatives from organizations providing and supporting rural and remote medical service delivery, and private rural and remote GPs. The organizations represented at the workshop are listed in Appendix 2. An overview of the strategies is presented in Table 9. A number of new models have been developed from information gathered at the workshop and is presented in the Chapter 7.

6.2.1 Practice Ownership and Management

Rural communities with populations that sustain one or more private practices, supports the traditional small business model where self employed GPs see patients in a private, community based surgery usually on a fee for service basis, funded largely by the Health Insurance Commission (HIC) through Medicare, supplemented by varying levels of private billing dependent on local issues including socio-economic status of the community.

Strategy 1. Division of General Practice operating a Practice Management Service or operating as a Corporate General Practice

This model builds on learning from the Virtual Amalgamation Demonstration Project undertaken by North and West Qld Primary Health Care (formerly the Northern Qld Rural Division of General Practice).

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and the Easy Entry, Gracious Exit model developed by the NSW Rural Doctors Resource Network. This model would have application to small practices (1-2 doctors), particularly in communities where it is difficult to recruit staff with appropriate management skills, where doctors are not interested, or skilled in running a small business, may not wish to make a long-term capital commitment, and seeks to reduce workload associated with running a business. The model provides continuity of the practice at times of doctor turnover. There are two variations to this strategy:

**Variation 1.** The practices remain private entities contracting practice management services from the Division, but continue to employ practice staff.

**Variation 2.** The Division operates as a corporate general practice and employs practice nursing and reception staff, and the doctor pays a service fee to the Division. This is similar to the Easy Entry, Gracious Exit model, however in this instance the entity is the Division of General Practice rather than a specifically created company.

This strategy is a further extension to what some rural Divisions are now doing with respect to practice support and employment of health professionals as service providers e.g., allied health, diabetes resource nurses, diabetes educators, continence nurses.

**KEY FEATURES**

Under this strategy, the Division of General Practice operates a practice management service. The service includes:

- Developing practice staff position descriptions and contracts, assisting doctors in recruitment and selection of staff (Variation 1) and employs staff (under Variation 2)
- Developing/updating protocols and procedures manuals
- Preparing practices for accreditation/re-accreditation
- Establishing and maintaining a centralised practice management system to support payroll, Business Activity Statements, HIC claims, standardized account keeping and data entry
- Identify information technology requirements
- Identify and organize staff training (reception and nursing)
- Register new doctors for provider numbers
- Ensure administrative processes in place to access PIP payments and other grants available to doctors/practices
- Provision of information technology/information management (ITIM) support
- Assistance in establishment and maintenance of recall systems

Under Variation 1, individual practices would identify the features of the practice management service applicable to their individual circumstances or changing circumstances. The Division would be remunerated for the provision of this service to the practice, based on a monthly fee or percentage of fees.

The Virtual Amalgamation Demonstration Project showed a revenue growth and net profit increase for participating practices (that allowed access to financial data). While there were only four practices participating in the demonstration project, GPs reported improved quality of life because they did not have to focus on administrative matters, improved working environment, they were able to focus on clinical matters, improved time management for leisure and professional development.

**RESOURCES REQUIRED TO IMPLEMENT STRATEGY**

- Highly skilled practice manager (dedicated position) at a central office, and travel budget
- Information technology infrastructure at Division office and compatible with each practice to support remote access (best option may be for Division to own IT equipment and lease to doctors)
- Establishment of practice management network across the Division with inventory of expertise/skills and services within the Division that could support remote practices and may reduce travel burden and cost for the central practice manager position
• Guaranteed supply of locums to ensure continuity of service and income from practice to minimise financial risk to Division when turnover of doctor(s)
• Service fee would need to make provision for ongoing equipment expenses and upgrading when required (Variation 2)
• Significant resources would be required in the initial investigation and establishment of the business structure to operate the corporate general practice. The development of the Easy Entry Gracious Exit model was underwritten by funds from the Commonwealth Government.

The point of time at which the Division took over the ownership and management of the practice has implications for resources required. If the practice is operating as a going concern with an income stream in place, then the Division would be required to purchase equipment and stock from the practice principal, and would therefore need initial capital. If the practice were without a full-time doctor, the Division would require capital for the initial purchase of stock and equipment, and would face operating expenses (staff and running costs), whilst an income stream from GP consultations would be limited by the delay in Medicare payments coming to the practice.

**Linkages with other programs/strategies**
This strategy is an extension of the work that many Divisions currently do in their practice support program areas i.e., practice staff training, assistance with accreditation, ITIM support, the practice nurse incentive program for RRMAs 3-7 with extension to outer metropolitan areas under Medicare Plus.

Linkages between the Division and individual practice principals, the central practice manager and practice staff, need to be established and maintained for sustainability of the model.

**Risks to be managed**
• Development of the corporate infrastructure to underpin this model within the Division. Divisions of General Practice are usually incorporated associations or companies with limited liability operating on a not-for-profit basis. Divisions progressing this model need to seek legal and financial advice to determine appropriate governance and business structure to protect the Division and manage financial risk and medico-legal risks.
• Service agreements must be negotiated with each practice purchasing practice management services from the Division, clearly defining the services to be provided and how the fee will be determined and paid.
• Budgeting the costs associated with running the practice management service the Division must consider down periods when service fees may not be paid or reduced e.g., turnover of resident doctor, but Division has to meet ongoing fixed costs associated with the practice management service.
• Whilst the Division may continue to operate on a not-for-profit basis, the practice management service must operate under commercial business principles, with profit ploughed back into the service.
• Division owns and leases computers to practices to ensure compatibility with central practice manager, upgrades, back-up and virus protection maintained to promote remote access. Broadband internet access required.
• Variation 1, a doctor may initially be happy with contracting practice management services, but over time wish to take back the running of the practice. The risk is that the practice would run down and become unprofitable and the doctor would look to the Division to take back the practice.
• Variation 2, the doctor lacking commitment to work as hard as may do when owns the practice, and the need for the Division to have someone acceptable to the doctor(s) to manage them. This could be addressed by the appointment of a local or external Medical Advisor as undertaken by Rural and Remote Medical Services Ltd in the Easy Entry, Gracious Exit model.
• Agreement in place with the owner of the practice building (whether Queensland Health, local government or private owner) that the
premises are maintained and meet accreditation standards

- This strategy needs to be costed to determine whether direct billing will meet management and operational expenses, and ensure adequate remuneration to the doctor(s), or whether a co-payment is required.

**Strength of the Strategy**

The strength of this strategy is that the practice continues operation after the incumbent leaves and in the interim to support the locum until a replacement doctor is in place. Furthermore, there is continuity of employment for practice staff, and the practice is maintained as an ongoing concern to support the recruitment of a new doctor: Variation 2 of this model supports fund-holding strategies such as the MAHS program, Regional Health Services program to create employment for allied health professionals to work across practices.

Under current arrangements in Queensland, it is likely that this scenario would be attractive to Medical Superintendents and Medical Officers with Right to Private Practice. Currently, the surgery, doctor’s house(s) and doctor’s vehicle(s) are provided by the District Health Service, and the doctors would continue to provide hospital based care on the retainer basis as outlined in the MSRPP contract. The Division would either lease the practice building and equipment from Queensland Health, or an agreement may be negotiated that Queensland Health would continue to provide this support as part of the retainer paid to doctors working as MSRPP.

In communities in which the MSRPP model does not operate, the Division would lease the building from the owner. Viability of the strategy would be improved by local government owning the practice, and assisting in sourcing and maintaining accommodation for the doctor.

Under The Easy Entry Gracious Exit model operating in NSW, the entity is a non-profit company limited by guarantee, with a Board of 6 Directors representing the NSW Rural Doctors Network, the Rural Doctors Association (NSW), the Outback Division of General Practice (local Division), and the Walgett Aboriginal Medical Service. The entity, Rural and Remote Medical Service (RARMS) employs a Manager (part-time), Finance Officer (full-time) and part-time Medical Advisor. It also employs a practice manager and support staff at the two practices located in Walgett and Lightning Ridge. GPs contract RARMS to provide infrastructure and support (35% of consultation fees) plus negotiated share of PIP payments. The GPs are contracted by the local Area Health Service to provide VMO and public health services. The local Area Health Service also contracts RARMS to provide financial management, monitoring, negotiation of VMO service agreement, and act as agent for recruitment of GPs/VMOs.

**Strategy 2. Community Controlled Health Service**

Community Controlled Health Services usually operate in indigenous communities or centres where there is a large Aboriginal and Torres Strait Islander population. An Aboriginal Community Controlled Health Service (ACCHS) is a primary health care service initiated by local Aboriginal communities to deliver holistic and culturally appropriate care to people within their communities. Their Board members are elected from the local Aboriginal community.

Aboriginal communities around Australia have been establishing such services since the early 1970s in response to a range of barriers inhibiting Aboriginal access to mainstream primary health care services and, as an expression of self-determination.

Aboriginal Community Controlled Health Services are usually staffed by one or more general practitioners, nursing staff and indigenous health workers. Aboriginal Community Controlled Health Services receive operational funding from the Office of Aboriginal and Torres Strait Islander Health to provide core services. These are generally in nutrition, child and maternal health, but may also include health education, training and advocacy of the need for improved health services for Aboriginal and Torres Strait Islander people.

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health, hearing health and social and emotional wellbeing, dependent on the needs of the local community. Some services are specifically funded to provide GP services while others generate funding for GP services through Medicare. In the Aboriginal Community Controlled Health Services, provider numbers are linked to the service rather than the individual doctor, therefore HIC payments go directly to the health service. Doctors are usually employed by the service, or paid on a sessional basis.

This model is not limited to aboriginal communities but is feasible in the mainstream.

**Key Features**

- Under the community-controlled strategy, an incorporated community organization owns and operates the medical/health service, with governance by a Board of Directors.
- This strategy would have the advantage of the Strategy 1 Variation 2, as the doctors would have no capital commitment. The advantage for the community is that it can direct how services are provided in the community.
- Profit is directed back into the service for provision of additional services.
- Community organization could contract a practice management company (Model 1) to manage the service.
- Alternatively, the doctor could lease the practice from the community.

**Resources Required to Implement Strategy**

- A suitable building for the GP clinic/primary health care clinic.
- Residence for the doctor.
- Vehicle for doctor (if competing with MSRPP).
- Practice support staff (practice manager, receptionist, nurse).
- Initial capital funding to establish service or take over existing practice.
- Medical Director or Advisor (could be external).
- Requires local champion(s) to establish service.
- Local training/capacity building for community and local government to understand concept and risks, decision-making to proceed, progress development, governance training.

**Linkage with Other Programs and Strategies**

- QRMSA supports the community organization through recruiting doctor(s) and sourcing locums.
- Division involvement to provide practice support and preparation for accreditation (if practice management model not in place).
- Practice could access Practice Nurse Incentive program to assist in employing nurse.
- Practice linked to MAHS and Regional Health Service programs operating in area.
- Community organization negotiate contract with local District Health Service for GP to provide VMO services.

**Risks to be Managed**

- Given the current medical indemnity arrangements, the organization would be very exposed if it directly employed the doctors, but the community organization could contract the doctor(s) to provide services paying the doctor a percentage of fees, or contract on a sessional basis.
- Strong governance processes required.
- Succession planning within the Board.
- Succession planning for doctors.
- Whether remote communities could access exemptions allowing direct HIC payment to the organization, rather than the doctor requires investigation.
- Unreasonable demands by community e.g., bulk billing impacting on viability.

### 6.2.2 After-Hours and On-Call Commitments

There are several strategies that could be developed to reduce the burden of after-hours and on-call. Telephone triage models have been established in a number of locations as part of the Commonwealth’s After Hours Primary Medical Care Trials. Several of these models are currently being extended to cover larger regions e.g., GP Assist Tasmania commencing operation in...
November 2003. Alternatively, the development of local after hours services requires triage training of nurses in small rural hospitals, with training re-occurring while the high turnover of nurses and utilisation of agency nurses persists.

In larger rural centres in Queensland the hospital is staffed by full-time Medical Superintendents and Medical Officers, with an on-call roster of between 1:2 or 1:4 dependent on the size of the facility and number of salaried doctors. In addition, the private GPs in the town also operate one or more after-hours roster(s). This system could be improved by integrating after hours service provision across the private/public interface by establishing a common roster. The following section describes the key features, resources required, and risks associated with each model.

**AFTER HOURS AND ON CALL STRATEGY 1: TRIAGE BY QUEENSLAND AMBULANCE SERVICE**

The Queensland Ambulance Service, Northern Region currently operates an after-hours triage system in conjunction with the Townsville Division of General Practice. In Townsville a co-operative after hours service has been established. Clients can access a doctor at a central medical practice until 10pm. Between 10pm and 7am, people calling the 1300 number for Townsville After Hours Service are diverted to the Queensland Ambulance Service where the call is triaged using standard QAS protocols (Advanced Medical Dispatch System). If the triage determines that the call is Category 2A or above an ambulance is dispatched. However, if the call is “lower level” the caller is either dealt with directly by the communications officer using QAS protocols, or the caller is asked if they wish to speak with the GP on-call.

**KEY FEATURES**

- This strategy could be extended to a regional level. In the rural setting, a campaign would be undertaken to promote the 1300 number for medical attention after-hours. (After-hours can be defined as after 6pm in rural communities as the call would go through to the QAS communications centre)
- The QAS triage the call using standard protocol, if the caller requires to speak with a doctor; the QAS contacts the doctor on-call in the specified town, and arranges with the GP how they want to manage the caller
- A further line of triage could be put in place by directing the call to the local hospital, where the RN triages the call and determine whether to call the doctor. However, this would require triage training of nurses across all sites

**VARIATION**

- Between 6pm and 10pm, the calls could be diverted to the Townsville After Hours Service, where the caller would be dealt with by the doctor working in the after hours clinic. If the doctor determines the caller needs medical attention, the doctor would call the local duty GP to determine how the local GP wanted to manage the caller, and then pass this onto the caller
- After 10pm, the call would be triaged by the QAS, and callers put through to the Townsville on-call GP. The Townsville GP would give advice, or determine if the caller needed immediate medical attention. The Townsville GP would call the local duty GP to determine how the GP wanted to manage the call, and then pass this onto the caller
- This variation could operate over weekends

**RESOURCES REQUIRED TO IMPLEMENT STRATEGY**

- Additional QAS communications officer on shift (define FTE requirement)
- Media campaign informing communities of after hours telephone number. Ongoing promotion required
- Mechanisms for “hand over” each morning need to be developed between QAS and each community
- Mechanisms for billing needs to be established
- Measure & start cashing out savings. Potential savings to Queensland Health as currently make penalty payment to MS, MO (without RPP) for call out (Costs but no saving for MSRPP because retainer covers it)
**Linkages with programs and strategies**

- Builds on current Commonwealth After Hours Primary Medical Trials and extends reach on Townsville trial
- Requires promotion of concept and refinement of process with local doctors, QAS, Divisions of General Practice, rural and remote hospitals, RFDS

**Risks to be managed**

- Mechanisms to maintain currency of on-call rosters in rural towns
- Ensure ambulance communications centre have local knowledge across the region
- Variation - Ensure on-call doctors in Townsville have local knowledge across the region
- Telephone number needs to cover calls directly to hospital
- Willingness/training of communities to ring after hours number rather than doctor, or immediate presentation to hospital (where nurse may or may not have triage training)
- Financial viability reduced by “screened out patients” i.e., those not seeing the GP
- Access to telephone will limit application of model in remote indigenous communities

**After Hours and On Call Strategy 2: Family Care Telephone Triage**

This is a telephone triage model that operates from 6pm to 8am every night, and 8am to 6pm on weekends and public holidays. The Family Care and the GP Assist Tasmania are very similar models. The Family Care triage system is staffed by doctors, whereas the Tasmanian model has a nurse undertake the initial triage and then forward to triage doctor if triage algorithm indicates.

**Key features**

- GP phone number is switched through to triage service
- Calls are triaged/screened by registered nurse, if ambulance required dispatched locally, and notify the local duty GP. If query, call goes to triage doctor.
- Triage doctor deals with patient over the phone using clinical algorithms. If doctor determines that the caller needs to be seen by GP, triage doctor contacts local GP and triage doctor directs patient with how local GP wishes to manage problem.

**Resources required**

- Doctors pay joining fee plus monthly fee to Family Care
- Profile of local areas and software for triage doctors to pull local area profile for location from which patient is calling
- Mechanisms for hand-over each morning need to be developed in each community
- Mechanisms for billing need to be established
- Triage training of nurses

**Risks to be managed**

- Mechanisms to maintain currency of on-call rosters in rural towns
- Ensure on-call doctors and nurses have local knowledge across the region
- Telephone number needs to cover calls directly to hospital
- Willingness/training of communities to ring after hours number rather than doctor, or immediate presentation to hospital (where nurse may or may not have triage training)
- Access to telephone will limit application of model in remote indigenous communities

**After Hours and On Call Strategy 3: Nurse Triage Training – South Australian Workforce Agency**

The South Australian Rural Workforce Agency is currently developing a nurse triage training program to support after hours health service provision. The training program is being trailed in November and December 2003, with wider dissemination in 2004.
The objectives for the workshops are to:

- Enhance rural nurses knowledge and skills in assessment, communication and decision making for front line after hours health service provision
- Highlight the variety of ways in which after hours health services are provided by rural nurses and opportunities to develop alternate models for service provision
- Facilitate the development of sustainable frameworks for after hours health service provision through strengthened partnerships between local GPs and nurses
- Provide resources and information to support nurses in after hours decision making

**Variation**

Triage training of nurses across sites would facilitate the development of a shared after-hours roster across a geographical cluster.

**Key Features**
- External trainers undertake triage-training workshop in community, targeting hospital nurses
- Local GPs included in training process and workshop to define systems for communication at a community level

**Resources required to implement model**
- External trainers (1.5 days initial workshop, 1 day follow-up 6 months later)
- Funds to pay nurses for training time and GPs to attend communication/coordination meeting
- Community education about the system
- Skilled nurses remunerated appropriately, wages for nurses must reflect responsibility
- Ongoing professional development
- Rework Medicare item numbers so nurse can be reimbursed for triage (would offset higher state health costs for providing triage and reducing GP after call outs)
- Evaluation and monitoring

**After Hours and On Call Strategy 4:**
**Integration of after hours across public/private interface**

In larger rural centres in Queensland the hospital is staffed by full-time Medical Superintendents and Medical Officers, with an on-call roster of between 1:2 or 1:4 dependent on the size of the facility and number of salaried doctors. In addition, the private GPs in the town also operate one or more after-hours roster(s). In Queensland salaried doctors are relieved by rural relievers (PGY2 or 3), and often do not have the procedural skills required to manage road trauma, obstetrics, anaesthetics. In some communities, the public system is then supported by the private GPs but there are complaints regarding the poor remuneration to provide this service.

This system could be improved by integrating after hours service provision across the private/public interface by establishing a common roster. The strengths of the model include:

- Shares roster across a greater number of doctors – reduces burn-out
- Private GPs supporting public system and remunerated appropriately
- Increased breadth of procedural skills supplied to the community
- Ensures experienced doctors covering the town (as 2nd on call) in event of inexperienced relievers
- Balances access to Medicare in rural communities which historically is below average compared with metropolitan populations

**Key Features**
- Private GPs and Fulltime QH Medical Superintendents and Medical Officers share a common After-hours/On-call Roster for a community
- Roster has 1st on call with 2nd on call – having specialist/proceduralist skills if procedural skills required/ or backup required e.g., caesarean section, road trauma
- Patient elects to be a public or private patient, and if a private patient then Queensland Health staff reimbursed through Medicare.
This strategy would apply to towns such as Innisfail, Bowen, Ayr, Ingham, Emerald, Charters Towers (population usually >10,000)

**RESOURCES REQUIRED TO IMPLEMENT STRATEGY**

- Full time QH medical staff – need access to Medicare to service private patients. The hospital/facility has an after-hours provider number and then pays the QH doctor for providing the service. [Precedent - ACCHS have provider numbers that go to the facility]
- Private GP paid a retainer for doing public work on the After Hours roster (Reverse MSRPP), with retainer paid by QH

**RISKS TO BE MANAGED**

- This strategy could be perceived as a cost-shifting model but is not if understand that the both Commonwealth and State contributing to costs i.e., Medicare to QH facility/doctor and QH pays retainer to private GPs
- Allocation of after hours provider number to facility. Alternative is the provision of a provider number to individual salaried doctors, but would require obtaining a provider number for each relieving doctor

**6.2.3 INCREASING THE “CRITICAL MASS” OF GENERAL PRACTITIONERS TO MAINTAIN PROCEDURAL SERVICES**

**INCREASING CRITICAL MASS OF GPS TO MAINTAIN PROCEDURAL SERVICES. STRATEGY 1: “EMPLOYING” PRIVATE GPS TO PROVIDE HOSPITAL SERVICES**

Currently the continued provision of procedures in rural hospitals is hindered by relievers not having procedural skills, recruitment of salaried doctors without procedural skills, and private GPs withdrawing from procedural work due to a number of factors including medical indemnity, ageing, heavy on-call commitments, loss of complementary procedural skills to the community.

The key to the maintenance of procedural skills in rural and remote areas is the removal of the artificial barriers that exist between commonwealth and state funded services. A restructure of services is required in Queensland which would see the incorporation of private general practice into the provision of rural public hospital services.

**KEY FEATURES**

- Procedural skills could be maintained in a rural town by the District Health Service employing x FTE doctor(s) from a group practice (with doctors currently undertaking procedural work) to “job share” the salaried position(s)
- Services to be provided would be negotiated but are likely to include out-patient consultations, in-hospital care, procedural work and emergency services
- The model would also incorporate the integrated private/public after-hours service (After Hours Model 4)

The advantage of this strategy to the group practice is that it provides opportunities for doctors to undertake more procedures to maintain skills and improve financial viability of practice, medical indemnity covered by Queensland Health for public work, internal relief within town therefore certainty with respect to experienced procedural doctors available when salaried doctors on leave, reduces burden on Queensland Health to find relievers, reduced on-call commitments as pooling private and public doctors on the roster.

The certainty of income to the practice for the hospital position may also underpin the recruitment of an additional doctor to the group practice if demand is identified.

**RESOURCES REQUIRED TO IMPLEMENT STRATEGY**

- Should be resource neutral
- Medical indemnity of private GPs covered by District Health Service for public hospital work
- If net increase in number of procedures performed will have financial implications on District/hospital, but may be (partially) offset by reduction in Patient Transport Scheme
**RISK TO BE MANAGED**

- Defined contract of services to be performed
- If one After-hours and On-call roster operating in town, determine mechanism to include non-procedural GPs and second on-call into the roster
- Define GP payments for after-hours services so not “double dipping”
- Medical indemnity requires clarification and written agreement
- Community may perceive the model as net loss of services because less number of hospital doctors – manage through media
- Use existing industrial framework within Queensland Health to progress this model. This strategy is operating at Chinchilla

**INCREASING THE CRITICAL MASS OF RURAL DOCTORS TO MAINTAIN Provision of PROCEDURAL SERVICES. STRATEGY 2: TARGETED RECRUITMENT OF SALARIED DOCTORS WITH PROCEDURAL SKILLS**

Larger rural communities are experiencing difficulties in continuing to provide obstetric services, as private doctors withdraw from provision of procedural services which previously supported the public system. As larger rural communities may have several salaried doctors on staff (e.g., Emerald with 4 salaried positions), the continuation of procedural services in rural communities would be supported by active recruitment of doctors with specified procedural training i.e., obstetrics and/or anaesthetics.

The Medical Journal of Australia has a running debate regarding the role of the hospitalist – a doctor with a wide range of expertise but concentrating on acute hospital medicine, and specialising in acute and serious illness rather than chronic and ambulatory medicine. The hospitalist would have advanced resuscitation and procedural skills.

Egan et al (2000) proposed that Career Medical Officers could fulfil the role of a hospitalist. They contend that hospital wards may run more smoothly with greater satisfaction by patients, nursing staff, consultant medical staff and junior medical staff if there is rapid access to an on-site experienced medical officer. The senior doctor would be conversant with the dynamics of the ward, have an appreciation of the role of ancillary staff, and a long-term commitment to the hospital. The hospitalist/career medical officer would also provide educational opportunities to interns and junior medical officers during their “apprenticeship” years.

Whilst it may be considered that Medical Superintendents in the larger rural hospitals (e.g., Emerald, Ayr, Atherton, Mareeba) may currently be fulfilling the role of a career medical officer, there is clearly the need to support this with the other salaried positions filled by a doctor with a similar breadth of skills.

Procedural services in larger rural communities are being lost, and it requires the targeted recruitment of doctors with the pre-requisite qualifications to ensure the ongoing provision of obstetric, surgical and anaesthetic services.

**INCREASING THE CRITICAL Mass OF GPs TO PROVIDE PRIMARY CARE SERVICES TO SMALL COMMUNITIES. STRATEGY 1: ESTABLISHMENT OF SATELLITE PRACTICES**

This strategy would have application where there is a larger community with one or more group practices and a solo doctor community, or no doctor community within 1-1.5 hours drive (examples include Ingham and Cardwell; Bowen and Collinsville; Barcaldine and Aramac; Babinda and Silkwood). There are a number of variations on this model.

**KEY FEATURES**

- A group practice in a larger community, or a consortium of doctors from nearby larger community(s) provide a regular GP service to small community.
- The frequency of service is dependent on size of community.

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• Ideally between 1 and 3 doctors service the small community to provide some choice and possibly gender choice
• Doctors work from private rooms in the small community, which are rented from owner
• Appointment booking centralized to large town practice
• Branch practice computer networked to main office for patient records, billings
• Branch practice is a dispensing practice, therefore small community has access to pharmacy
• Local reception and nursing staff employed on part-time basis
• Close liaison with resident Queensland Health nurse (if there is one)
• After-hours directed to local health clinic (if there is one) or telephone advice from group practice

Or
• Regional after-hours service (see QAS strategy)
Variation 1
• Shire employs local reception and nursing staff
• Group practice pays Shire a percentage of fees to meet support staff wages and rent/maintenance of rooms

Variation 2
• Nurse works in branch practice and is virtually managed/clinically governed by doctors from group practice.
• Doctors have provider number for branch practice, Medicare revised so that practice item number offsets nurse wages

Resources required to implement model
• Adequate funding/income to offset travel time and travel costs
• Operate on fee-for-service basis
• Adequacy of local facility, could it be collocated with QAS, Queensland Health facility
• Pathology service
• Pharmacy
• Medicare revision to support practice nurse item number or practice item number

Linkages to other programs and strategies
Medicare Plus
Practice Nurse Incentive

Increasing critical mass of GPs to provide primary care services to small communities.

Strategy 2: Rotation of doctors to small communities

A variation to this model would be the rotation of doctors into the communities so that the position is shared between 2 or 3 doctors. This is similar to the Royal Flying Doctor Service Kowanyama model, where 2 doctors service the community, on a fortnightly rotation.
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<tr>
<td><strong>Increased critical mass of doctors to provide procedural services</strong></td>
<td>Health District “employing” local private GPs to provide hospital and procedural services</td>
<td>Health District “employs” local private GPs to provide hospital and procedural services by cashing out one or more hospital positions, enabling development of internal relief structures and removal of reliance on inexperienced junior relieving doctors, increased opportunities for private GPs to continue procedural services, availability of public procedural services not dependent on recruitment of salaried doctors with necessary skills.</td>
</tr>
<tr>
<td><strong>Targeted recruitment of salaried doctors with procedural skills</strong></td>
<td>Establishment of satellite practice</td>
<td>Group practice in larger town provides service to small community (no doctor) on regular outreach basis working from a small branch practice staffed by a practice nurse, with clinical governance from group practice. Alternatively, solo doctor in small community, incorporated into overall practice structure with relief provided from group practice</td>
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<tr>
<td><strong>Increasing critical mass of doctors to provide primary care to small communities</strong></td>
<td>Rotation of doctors to small remote community</td>
<td>Medical officer position shared between 2 or more doctors working from a regional location and providing services to community on a fortnightly basis</td>
</tr>
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CHAPTER 7: NEW MODELS

A key outcome of the Townsville Workshop was the identification that the sustainable delivery of primary medical services in rural and remote areas is dependent on the development of a multidisciplinary health team underpinned by the flexibility to work across the public and private interface, and across state and commonwealth boundaries. Communities were identified as central to service planning so that services matched community need (in terms of morbidity, size, remoteness, and cultural diversity), and that models of service delivery must be “sustainable for the practitioners.

Clearly new models of health care service delivery are required to stem the decline of rural communities and to address the poorer health status of those people residing in rural and remote Australia. The following principles to underpin new models were derived from the Townsville Workshop and provide a basis to evaluate existing and new models of primary care service delivery.

7.1 PRINCIPLES TO UNDERPIN NEW MODELS

The key principles derived from the workshop to underpin new models:

Principle 1: Minimum level of services standards are provided to communities benchmarked on specific size, geographical location and remoteness from other health services ensuring equity of access, timely and effective models of service delivery. Benchmark minimums include access to emergency treatment, drug requirements, equipment requirements and number and range of trained health professionals either resident or visiting.

Principle 2: Longer term sustainability of health services is underpinned by operating within a coordinated multidisciplinary health team to increase the critical mass of health professionals within a community and region, reducing individual workload, yet extending the range and continuity of services provided. The team includes doctors; nurses — Remote Area Nurses, hospital based, community and practice-based; physician assistants; allied health professionals; indigenous health workers; ambulance officers; and administrative support.

Principle 3: Community participation in service planning, and ongoing review and monitoring of service provision, to ensure accountability of service provision meeting community need.

Principle 4: Services match need (morbidity) and geographical remoteness of the community. The multidisciplinary health team provides a range of services relevant to the size and geographical remoteness of the community.

Principle 5: Quality of service provision is maintained through appointment of appropriately qualified and experienced health professionals, supported to undertake vocational and professional development to meet recognized standards, working in accredited health service facilities adequately equipped for the range of services provided supported by good information technology and management systems.

Principle 6: Culturally appropriate multidisciplinary service provision. All health professionals participate in cultural awareness training, receive orientation to remote and indigenous environments, and linked to local community mentors.

Principle 7: Agencies employing or contracting health professionals structure remuneration packages to incorporate retention strategies that address good quality accommodation, access to vocational and professional development, financially rewarding structure and sustainable working conditions.

7.2 NEW MODELS FOR CONSIDERATION

7.2.1 COMMUNITY MEDICINE MODEL

This is a new model based on the premise that commonwealth and state funds for a region are pooled and managed by a local authority e.g., “Regional Primary Health Care Authority”.

Key features

- The Regional Primary Health Care Authority is governed by a Board or management committee,
with representation from community organizations, local government, state and commonwealth health services, and Divisions of General Practice
• Regional Primary Health Care Authority owns or rents, and equips the Community Health Centre. The premises meet accreditation standards and has sufficient space to accommodate resident and visiting services, and training
• The Regional Health Care Authority provides or contracts in practice management services
• The Community Health Centre provides a range of services including medical, after-hours, allied health, practice nurse, indigenous health worker, visiting or resident specialist services, and has facilities to promote access to health information for patients/clients. Depending on the size of the community, allied health services are resident or visiting.
• The Community Health Centre undertakes virtual management of branch practices staffed by a resident practice nurse
• The GP(s) and practice nurse go into hospital to arrange post-discharge care, therefore In-Reach into hospital instead of outreach from hospital
• GP provides clinical governance to practice nurse (which is a fundamental difference to the nurse practitioner model where this clinical governance is not in place).
• Doctor sees acute patients, new patients or chronic care patients when change in treatment plan required, whilst practice nurse undertakes routine follow-ups, providing GP with greater capacity to see more serious cases, and also reducing workload
• GP works on a fee for service basis (remunerated on percentage of fees generated)
• The Regional Primary Health Care Authority liaises with local Rural Health Training Units, Universities, University Departments of Rural Health, and GP Training Consortia to provide facilities for training health professionals and GP Registrars

**LINKAGE WITH OTHER PROGRAMS AND STRATEGIES**
• Practice Nurse Initiative
• More Allied Health Services Program
• Regional Health Services
• Similar concept to Primary Health Care Access Program

**RESOURCES REQUIRED TO IMPLEMENT MODEL**
• Commonwealth and state funds pooled to regional authority which acts as the fundholder/auspice that can purchase, allocate or broker services with these funds
• Medicare is revised so that the doctor provider number covers virtual branch practices
• A practice item number is developed to cover nurses seeing patients (relieving burden on GP for routine follow-ups)
• Practice and premises ownership could be a mix of public, private and corporate

**RISKS TO BE MANAGED**
• Regional fund holding but local authority not able to provide for all health needs therefore requires community input into prioritising services to meet local need
• Medicare revision required to support payment of nurses and operation of branch practices in small communities

**7.2.2 INCREASING CRITICAL MASS OF GPs. GP Registrar working across a geographical cluster**

Throughout rural and remote Queensland there are numerous solo doctor communities of a size that requires one and a “bit” doctors, or just under one. There are opportunities for looking at specific geographical clusters in order to develop models that would increase the number of doctors servicing a cluster, spread the on-call load, and establish mechanisms for “internal” relief.

This model would be applied to a cluster of communities within a 1-2 hours drive (examples include Julia Creek, Richmond, Hughenden; or Blackall, Barcaldine, Alpha; or Theodore, Taroom, Moura, or Normanton, Karumba, Mornington Island, the number
of communities in the cluster would depend on geographical distance).

**Key Features**

An advanced term GP registrar is attached to the designated training practice (one of the cluster). Ideally this would be the town/practice that has the highest non-referred attendances/Full-time equivalent. This is the community where the GP registrar lives. A roster is developed so that the GP registrar works across the two or three communities, and participates in the after-hours and week-end on-call roster across the cluster. The roster would be developed so that regular relief is provided within the cluster. The roster would have to be developed in such a way that the GP Registrar had sufficient time at their base location to establish social linkages.

A training pathway must be developed for the Registrar. The GP registrar could enter the Remote Vocational Training Program. Alternatively a University Department of Rural Health such as the Mt Isa Centre for Rural and Remote Health, and regional training consortia, could run a similar program with local mentors. The RACGP and ACRRM have an agreement that this program is equivalent to the RACGP Rural Stream, and recognized towards the FACRRM.

Within this model there is potential for promoting procedural work in the cluster communities. This could occur by the Registrar covering one town while the resident doctor travelled to a second town to do a list with the resident doctor, alternatively the registrar could cover a town when the flying surgeon visits, with the resident doctor undertaking anaesthetics.

**Resources Required to Implement Model**

- Salary for GP registrar
- Accommodation
- Car and expenses for travel between communities
- Indemnity for public procedural work paid for by state health(?)
- Extra GP rooms required at some sites i.e., adequate space within cluster practices for a second doctor?

**Linkages to Other Programs and Strategies**

- It is important that a training pathway is established for the GP registrar, and this may require negotiating some flexibility in training with the RACGP and ACRRM. Who should drive this process? Is it a practice principal at one of the cluster practices, or is it a role for the Rural Workforce Agency or Division?
- Linkages with local governments across cluster to negotiate financial inputs to support accommodation and vehicle for the GP registrar

**Risks to be Managed**

- Industrial opposition from within the ambulance, nursing and medical professions to the changing role of ambulance officers (or other professions)
- Managing community perception that Ambulance Officers’ role dedicated to emergency response
- Defining locations or ‘areas of need’ in which the physician assistant model would operate

### 7.2.3 Increasing Effectiveness of Existing Resources in Small Communities

**Increasing Effectiveness of Existing Resources 1: Ambulance Officers part of Health Team and Development of Concept of Physician Assistants**

A recent study undertaken by the Queensland Ambulance Service indicates that many ambulance stations in small rural and remote communities have a very low workload when averaged out across a period of time. In some locations ambulance call outs are measured in days per call-out, with active service time averaging less than 20 minutes per day. Consequently ambulance officers are an under-utilised resource in these communities and alternative activities could be developed that would incorporate ambulance officers into the multidisciplinary health team.

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DEVELOPMENT OF AMBULANCE OFFICERS AS PART OF THE LOCAL HEALTH TEAM

This concept could be developed and implemented immediately. It requires a negotiation between the Queensland Ambulance Service, Queensland Health, Divisions of General Practice and local GPs to identify opportunities at a state, regional and local level for ambulance officers to play a broader role in health service delivery, health promotion and education in conjunction with local doctors, nurses (hospital, community and practice-based), indigenous health workers, allied health and community service providers.

THE RANGE OF OPPORTUNITIES INCLUDE:

- As an additional service provider working within local hospitals, providing addition skills and increase opportunities to practice skills
- Working within the general practice setting and adding to capacity of the practice
- Working with community health nurses and indigenous health workers in chronic disease management, health promotion, mental health literacy
- Working as therapy assistants under supervision/direction of allied health professionals

RESOURCES REQUIRED TO IMPLEMENT MODEL

- This model could be cost neutral where ambulance officers are already located in communities.
- The main resource implication is whether remuneration would be altered to reflect variation to current position descriptions.

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- This model could be cost neutral where ambulance officers are already located in communities.
- The main resource implication is whether remuneration would be altered to reflect variation to current position descriptions.

RISKS TO BE MANAGED

- Industrial opposition from within the ambulance, nursing and medical professions to the changing role of ambulance officers (or other professions)
- Managing community perception that Ambulance Officers’ role dedicated to emergency response

INCREASING EFFECTIVENESS OF EXISTING RESOURCES 2: AMBULANCE OFFICERS WORKING AS PHYSICIAN ASSISTANTS

Discussions have been held between the Queensland Ambulance Service and the North West Qld Allied Health Service to pilot the use of ambulance officers as therapy assistants to provide follow-up to clients under the direction of the visiting allied health professionals. Other opportunities exist to explore the concept of developing physician assistants to with GPs in areas of workforce shortage to extend the provision of primary care services.

PHYSICIAN ASSISTANTS

A physician assistant is a professional who practices medicine under the supervision of a licensed physician and strives to deliver accessible and comprehensive health care to individuals, families and communities. The physician assistant practices primary care in ambulatory private practice settings, institutional settings, industrial settings, community based clinics, correctional facilities, long-term care facilities and the home setting. The physician assistant profession evolved in the 1960s when the United States was facing a shortage and mal-distribution of doctors for primary care services. Medical corpsmen returning from Vietnam wanted civilian jobs to apply the skills they had learned. The physician assistant was seen as a way to improve the supply and distribution of primary care services and extend the practice of a doctor. In excess of 100 physician assistant programs have been established in the United States. The physician assistant is trained in the medical model designed to complement physician training. They are trained as a primary care generalist to work within primary health care teams, with emphasis placed on health promotion, risk reduction, health maintenance and preventive care.

113 www.med.und.nodak.edu/depts/fammed/PA/Description.htm
In the United States, the University of North Dakota physician assistant program requires applicants to the program to have current nursing registration, with 4 years minimum experience, and a Bachelor’s degree in either Arts or Science. Another pre-requisite is to have a licensed physician (equivalent to general practitioner) who will serve as a preceptor for the entire one-year course of study, to provide one-on-one clinical teaching, supervision, evaluation feedback to the student.

The physician assistant program offered by the University of Mexico has a more practical approach using problem-based learning. Applicants are required to have experience in health care but do not require nursing qualifications. The physician assistant gains a Bachelor’s degree at the completion of the two-year full-time course.

The application of the physician assistant model to ambulance officers would require consideration of the skills and qualifications of ambulance officers in the development of the curriculum. Opportunity also exists to stream enrolled nurses, indigenous health workers and registered nurses into this career pathway, with the physician assistant credentialed to undertake specific services based on previous qualifications and levels of competency.

Decentralized training for the didactic components of the physician assistant’s curriculum has been established by some programs in the United States, resulting in comparable academic outcomes to those programs delivered centrally. This has facilitated the retention of physician assistants in under-serviced areas. The University Departments of Rural Health and their associated “parent” university are ideally placed to develop the curriculum and provide training for local health professionals to retain these services in rural and remote areas.

**Resources required to implement model**

The physician assistant model requires:

- Development of curriculum and accreditation of course
- Ambulance Officers and other health professionals going off-line for periods of training, therefore requiring backfill
- General practitioners to act as preceptors and take on training and supervisory role
- Establishment of a salary scale for physician assistants, and restructure of ambulance officer’s and other health professionals’ salary scale to acknowledge higher level of skills and different role
- Legislation to recognize and define role and responsibility of the profession

**Risks to be managed**

- Opposition from within the ambulance profession to changing role
- Opposition from nurses and nurses’ union to changing role of ambulance officers
- Opposition from medical profession to changing role of ambulance officers
- Managing community perception that Ambulance Officers’ role dedicated to emergency response
- Defining locations or ‘areas of need’ in which the physician assistant model would operate

**Increasing effectiveness of existing resources 3: Maintenance of Specialist Nursing Skills in rural communities**

The maintenance of obstetric services in rural communities is threatened by the reliable supply of midwives. Strategies need to be developed to maintain the supply of midwives, and ensure that they are undertaking sufficient deliveries to maintain skills. Access to specialist services such as palliative care, diabetes education, stoma therapy and continence is difficult to obtain in rural communities. Recently Divisions of General Practice have commenced employment, and upskilling of nurses under the More Allied Health Services to undertake Diabetes Education or work as Diabetes Resource Nurses. Some Divisions have also been successful in obtaining HACC funding to develop continence nurse positions. This model could be extended and would see nurses within a community or region upskilled across a range of specialties dependent on the health priorities of the community/region.


**KEY FEATURES**

- With respect to midwifery, midwives work across the community/hospital interface. Midwives are “assigned” to a pregnant woman for the duration of the pregnancy i.e., ante-natal, delivery and post-natal care, in a shared-care arrangement with the local doctor.

- Dependent on size of community and number of deliveries the role of the midwife may also be extended to women’s health nurse, child and maternal nurse. Two nurses work across the combined roles (allows on-call rotation)

- Community midwife has capacity to undertake home visits (properties) during ante natal and post-natal period

- Whilst a predominantly community-based position, the nurse attends the delivery and “specials” the mother and baby post partum

- Nurses trained in other specialities would also work across the community and hospital interface e.g., palliative care, diabetes education, stoma therapy, continence

- If nurses are employed by Divisions of General Practice or local GPs it supports the community medicine model where GPs and practice nurses/ specialist nurses are “in-reaching” into hospitals to improve patient management post discharge

- Specialist nurse has a case management role

**RESOURCES REQUIRED TO IMPLEMENT MODEL**

- Funding for nurses – possible sources include practice item numbers (if employed through general practice), cashing out some hospital nursing positions i.e., midwives, HACC funding (continence and palliative care)

- Review of Medicare to extend to practice item number or further extend practice nurse item number indicated in Medicare Plus

- Funding to train nurses in identified specialist areas, and backfill to enable release for training

**RISKS TO BE MANAGED**

- Employment of nurses through hospital obstructs flexibility required for these positions and therefore alternative employers should be considered e.g., Divisions of General Practice, community organizations, local general practices

- Requires recruitment of nurses with specific set of skills, alternatively train local nurses (which is likely to be more sustainable model)

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**7.3 DEVELOPMENT OF NEW MODEL: APPLICATION OF PLANNING MATRIX AND PRINCIPLES TO THE REAL WORLD**

This section will apply the principles and new models derived from the Townsville Workshop to rural and remote locations in Queensland to describe sustainable models of service delivery utilising existing resources. Three models are presented. One seeks to improve the sustainability of primary care services in small remote communities. The second model seeks to improve the sustainability of delivering procedural services in a rural area, and the third seeks to support the provision of primary health care services in very remote areas.

**7.3.1 SMALL REMOTE COMMUNITIES**

Currently in Queensland there are a number of communities that have fragile health services. An example is the community of Apple. This town is the service centre of the Apple Shire, and has a population of 3,500 of which approximately 25% are indigenous people. Apple is 1.5 hours drive from the large town of Grape, which has a base hospital with resident and visiting specialist services. Apple has a hospital serviced by a Medical Superintendent with Right to Private Practice and a Medical Officer with Right to Private Practice. The hospital is a 25 bed facility (which includes 2 aged care beds and 1 respite). It employs a full-time Director of Nursing, 3 Clinical nurses, 9 registered nurses and 6 enrolled nurses. There are 3 shifts/day covered by 3 nurses. Minor operations are performed at Apple and a number of nurses have theatre skills. About a third of the nursing positions are covered by agency nurses. Occupancy rates are about 45% with most patients being short stay as it is a predominantly young community, however the accident and emergency department is busy with one nurse usually stationed there.
A community health nurse and indigenous health worker operate from the community health building. The general practice has 3 consulting rooms, and employs a practice nurse and reception staff. HACC services are managed and delivered by Blue Care. A private pharmacist is established in Apple. Apple is well serviced by visiting allied health services provided by a Commonwealth funded regional health service. The allied health professionals visit on a three weekly basis and provide psychology, speech pathology, occupational therapy (Functional team 1), physiotherapy, dietetics and podiatry (Functional Team 2). The Queensland Ambulance Service has 2 officers stationed in Apple. A large mine is located 70 km south of Apple, with some staff residing locally, but the majority of skilled staff work under a fly-in fly-out basis.

A further 100km east of Apple is Tomato, the service centre of the Tomato Shire. The Tomato Shire has a population of 1200, of which approximately 6% are indigenous people. Tomato has a hospital serviced by a Medical Superintendent with Right to Private Practice. The hospital is a 10-bed facility (8 acute and 2 dedicated aged care) and employs 8.5 nursing staff (4.5 RNs and 4 Ens). Currently 65% of nurses are agency nurses. Two nurses cover each shift. Acute occupancy rates are low, usually only 1 patient at a time. Trauma, surgical, obstetric cases are air-lifted out, as are seriously ill patients. A limiting factor to maintaining patients in Tomato is the lack of pathology services, where specimens are sent to Grape on the daily bus service.

The general practice is a dispensing practice. The facility is small with only one consulting room and no treatment area for a nurse. A community health nurse is based at the hospital. Tomato is serviced by the allied health regional health service on a 6 weekly basis, with the allied health professionals working in functional teams. The Queensland Ambulance Service has one officer stationed at Tomato.

The doctors working in Apple and Tomato are overseas trained doctors working under the 5 year program (“Docs for the Bush”) and their mandatory tenure will be completed in 12–18 months time.

**What models could be developed to improve the viability of primary care services in this cluster?**

The total population of this cluster is 4,700. The RDAA Viable models project benchmarked workforce at 1 fulltime doctor to 750 SWPE in communities where the doctor provides in-patient, emergency and after-hours services. On the basis of a population of 4,700, 6.3 doctors would be required to service the cluster using RDAA benchmarks. Local knowledge of health service provision and utilization would suggest that 4 doctors plus a GP registrar would adequately service the cluster, with three doctors and GP registrar based in Apple, and one doctor in Tomato.

**Restructuring current service delivery**

Restructuring health services is contentious in any community but particularly rural and remote communities that have witnessed the decline in banking, schools and other services. Utilising the principle of community participation, and building on the community medicine model, a local health committee is formed in both Apple and Tomato. The committees include representatives from local government, the school, aged care providers, nominated community members, local doctor, Director of Nursing, the local Division of General Practice and the District Health Service.

Each health committee reviews the issues associated with health service delivery in its respective community. Issues common to both communities include:

- The known intention of the current doctors to relocate in 12-18 months time
- Low occupancy of the hospitals but regular utilization of the emergency department
- Heavy reliance on agency nurses placing heavy burden on local hospital budget
- Need to travel to Grape for obstetric services and other procedural services
- Whilst the District Health Service provides relieving doctors to Tomato and Apple, these are usually junior doctors, and there has been occasions when the local doctors have had to cancel their leave because a reliever was unavailable
ISSUES SPECIFIC TO TOMATO
• General practice premises has limited capacity and inadequate space for a nurse or GP registrar
• Tomato is on a highway and the doctor and hospital must deal with a number of serious road accidents and farm accidents each year. However, the ambulance officer is often not busy
• There is no domiciliary nursing service available
• The local doctor finds the constant on-call very stressful and will move to a larger community to alleviate this when his tenure is completed
• Prior to the recruitment of the current doctor the town was serviced by a series of locums for 4 months and the general practice facility was closed during that period. The current doctor had to re-establish the practice, recruit and train a receptionist, but had no experience of running a business or general practice. The local Division assisted him to establish the business processes

ISSUES SPECIFIC TO APPLE
• Whilst Apple has a theatre and nursing staff to support surgery, only minor operations are performed as the town is relatively close to Grape, and in the current medico-legal environment, surgeons will no longer work in the small rural hospital
• It is difficult to obtain an appointment to see a doctor as the doctor is usually booked out a week ahead (GP: population ratio is 1:1,750)

The communities have some hard decisions to make. They recognize that the current model of medical service delivery is very taxing on the doctors, and contributes to the high turnover of doctors, but the community expects a reliable medical and after-hours service equitable with other communities and taxpayers. There are a range of visiting services but little coordination, therefore local people can miss out on seeing the visiting allied health professionals. Both communities experience difficulties in accessing child health services and post-natal care. They are frustrated by the fact that the hospitals are relying on agency nurses when in fact there are a number of people in the community who are registered nurses but no longer want to work in the hospital setting. Tomato residents are aware of the inefficiency of providing a full nursing roster to manage only 1 or 2 patients, but they don’t want to lose their hospital because “you never know” when an emergency will arise.

Apple and Tomato are fortunate in that they are communities with strong leaders. The leaders got together to sort out whether there was synergy in tackling these problems together. The health committees met and over a period of time came up with two models for consideration.

7.3.2 THE FRUITY MODEL
The hospital at Tomato has low acute occupancy, but does have 2 aged care patients. The service could be restructured such that Tomato retains a full-time doctor that provides general practice and emergency services, and manages the aged care patients. Current nursing positions are restructured so that 1 RN position is upgraded to a Remote Area Nurse. A second RN position is maintained as a practice nurse, and 2 EN positions supported by an aged care worker are maintained as carers for the aged care beds. The hospital no longer has acute inpatient services, but does maintain the aged care patients with nursing care covered across the RAN, practice nurse and ENs. The ambulance officer position is upgraded to a physician assistant position, with the officer providing an emergency response as well as assisting the local doctor and Remote Area Nurse in the general practice clinic. When the doctor has weekends off or on short-term leave, Tomato is covered by the Remote Area Nurse and/or Physician Assistant, with clinical governance provided by doctors in Apple.

The doctor operates the private practice from the decommissioned Tomato hospital that is now a community health centre, with several holding beds for short stays and retrievals. Short in-patient stays are still possible with coverage by the two nurses and ENs servicing the aged care patients, which is similar to the range of services/type of patients that Tomato can currently manage. The private practice is managed by the corporate arm of the local Division of General
Practice. Visiting health services continue to operate from the health centre, and case conference with the local doctor and Remote Area Nurse at each visit.

In Apple, a third doctor is recruited with the assistance of the QRMSA, and the practice is accredited as a training practice. The GP registrar follows the Remote Vocational Training Scheme pathway, supervised by a doctor located in Grape. The 3 doctors and GP registrar operate a private general practice and service the hospital. The general practice has to be extended to make provision for an additional 2 consulting rooms, one for the registrar and another room for visiting health professionals. The cost of the extension to the practice is met by the local shire through a short-term rate levy, as the expansion in the facility is recognized as a mechanism to improve the sustainability of medical services. The general practice is initially leased by the corporate arm of local Division, and the Division has taken over the employment of practice staff and management of the practice. The doctors pay the Division a service fee. In the longer term ownership of the practice is likely to become the responsibility of the community. The Apple practice provides a weekly clinic.

<table>
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to the Mine site accommodation, and is contracted to undertake workplace medicals. The mine builds an additional two homes in Apple for the additional doctor and GP registrar, and receives nominal rent.

The number of beds at the Apple hospital is reduced from 25 to 12 (including 2 aged care and 1 respite bed). The reduction in bed numbers reduces the number of nurses required on shift from 3 to 2, with the aged care patients cared for by an aged care worker during the day. Occupancy rates now run close to 100% and continue to be short stay patients as was the case prior to the re-structure.

On-call is shared across the cluster with the Ambulance Officer/Physician Assistant, Remote Area Nurse and Tomato doctor included in the roster (1 in 7 first on-call). Within Tomato, if a patient is required to be seen there is a second on-call of 1 in 3 shared between the RAN, doctor and Ambulance Officer/Physician Assistant. A second on-call system also operates in Apple.

The reliance on agency nurses to fill hospital positions will be reduced under this model. However, the net number of nursing positions should not be reduced, but rather positions revised to establish specialist services to meet local need i.e., the nurses are up skilled to provide a range of specialist services. Midwifery positions become community-based and provide ante-natal and post-natal, child health and well-women’s services across the cluster. Other specialist services may include diabetes education, palliative care and continence. These positions would link with other visiting services and operate as functional teams with the allied health professionals and indigenous health worker. A small domiciliary nursing service is established. The revision of the nursing positions to community-based positions attracts local nurses back into the workforce and with some up skilling take up several of the specialist nursing positions, which are not shift positions. The opportunities for part-time work and job sharing in the specialist nursing roles are attractive to these nurses.

**Strengths of the Model**

- Net increase in the number of doctors servicing the cluster (GP:population ratio 1:960)
- Reduction in on-call commitments for doctors and Tomato ambulance officer across the cluster
- Upgrading the DON position at Tomato to a Remote Area Nurse, and development of physician assistant position reduces on-call commitments to solo doctor making position more tenable
- Internal relief provided across the cluster, removing the reliance on rural relievers and associated costs for Queensland Health
- Reduced reliance on agency nurses and hence savings to Queensland Health
- Improved efficiency of the hospitals, but still able to manage emergencies, retrievals and short-stay patients
- Nursing positions redefined to community-based positions to meet the cluster health needs and delivered efficiently using the concept of functional teams
- Administrative burden of running general practice removed from doctors
- Doctors do not have to make capital commitment to practice

**Resources Required**

- The only additional position is the doctor and GP registrar positions. These positions could be part funded on a measure and share basis, in that Queensland Health will not have the expense of providing rural relievers to the cluster (salary, transport and accommodation costs). The population of Apple shire should sustain a third doctor
- The Remote Area Nurse position and Ambulance officer/physician assistant positions will be remunerated at a higher rate in line with additional responsibility, however, there should be a net saving in nursing costs by reduction in agency fees and penalty rates
- Vehicles will be required to support community-based positions
- Training costs to up skill Ambulance officer, and specialist nurses
- Accommodation for additional doctor and GP registrar
7.3.3 Funding and Auspicing the Model

Several options could be developed to fund this model. Option 1 is a variation on the existing model, whilst option 2 fits with the community medicine model.

Option 1
Cash out MSRPP and MORPP positions at Apple. Queensland Health employs the Apple practice to provide outpatient, inpatient, emergency services and on-call to the hospital in a similar arrangement to the Chinchilla model. The general practice is a mix of private and bulk billing i.e., bulk billing pensioners, card holders and children. Income to the practice is derived as a mix of MSRPP and MORPP cashed out retainers plus house and car, fee for service, and contract work with the mine. Queensland Health continues to operate the Apple hospital and employ the nurses – both hospital and community based.

In Tomato, Queensland Health continues to contract the doctor to provide emergency services, manage short stays and aged care patients under the existing retainer and package. The doctor continues to run the general practice as a mixed billing practice. The RAN and EN positions are retained by QH, with the practice nurse position employed by Division. Part of the funding for the practice nurse position is derived from QH to cover aged care component and part-funded through general practice.

Option 2
This option is a bit more outside the box, but is in essence similar to the Primary Health Care Access Program, with the concept that state and commonwealth funds are cashed out, and controlled by a regional health council. It is also similar to the concept of the coordinated care trials.

The Fruity Regional Health Council is formed (it incorporates Apple and Tomato shires) to auspice and manage the Fruity Health Service. The Fruity Regional Health Council contracts the local Division to manage the general practice, and appoints a CEO to manage the service.

Primary health care services are cashed out. From the state, this would include:
- MSRPP and MORPP positions (although inpatient care included these are predominantly primary care positions)
- Community health nurse (Apple)
- Indigenous health worker (Apple)
- Community health nurse (Tomato)
- Visiting mental health services, sexual health and domestic violence
- HACC funding to Apple and Tomato Shires
- Nursing positions that are now community based to support specialist nursing positions

From the Commonwealth the funds would include:
- Regional health service funding to the communities through the allied health service
- OATSIH funding for the medical services provided by the Grape ACCHS to indigenous people in Apple and Tomato
- Proportional amount of Rural and Remote Women’s Health Service (auspiced by RFDS)
- GP services: National average for Medicare access MBS and PBS
- CCAPS funding

The Fruity Regional Health Council is able to purchase the services required (identified through the analysis of morbidity and local health priorities) from the District, regional health service, Aboriginal Community Controlled Health Service in Grape, and Blue Care.

The funds pooling concept has been progressed through the Coordinated Care Trials, with some of the Aboriginal trials operating on a whole of community basis, and others on specific target groups. The evaluation of the trials demonstrated that funds pooling:
- Provided the mechanism for funders to transfer existing funding to those organizations
- Provided the Commonwealth, States and Territories with an effective mechanism to allocate MBS/PBS equivalent funding and historical funding to community based health service organizations, thereby providing additional funding for local health services
- Facilitated dialogue between funders, providers and communities regarding health service priorities
Provided flexibility in the use of funds compared to historical practices
Provided transparency between the Commonwealth, the States and Territory service providers as to the historical levels of funding allocated to the programs

The concept of cashing out is challenging and would require all service providers to agree to fund pooling. The aboriginal coordinated care trials operated on a purchaser provider concept, with contributing organizations billing the fundholder for services performed. The contributing organizations allocated service delivery funds, not infrastructure funding and the evaluation recommended ensuring funding consideration to future capital expenditure.

7.3.4 MAINTAINING PROCEDURAL SERVICES

Rural and remote Queensland is in jeopardy of losing access to procedural services through planned regionalization of service delivery, and doctors choosing to place a greater emphasis on lifestyle and family commitments.

Mango is the service centre of the Mango Shire. The population of the Shire is 9,000, with Mango located centrally within the Shire. Mango is 200 km from the large regional city of Pineapple, which has a tertiary hospital facility with resident specialist services. Mango has a hospital staffed by a Medical Superintendent and Medical Officer. The hospital is a 40 bed facility. A range of allied health disciplines is available at the hospital including physiotherapy, podiatry and occupational therapy. The hospital provides general outpatient services, general surgery, obstetrics and gynaecology. However, the reliability of access to obstetric services has been impeded by the recruitment of a Medical Officer without obstetric qualifications. This has meant that some public obstetric patients have been sent to Pineapple to deliver when the Medical Superintendent was on annual leave and study leave. Community health operates from within the community health building in the centre of town and employs a community nurse and indigenous health worker. Mango is also serviced by a private general practice. The private practice is staffed by 4 GPs and employs 1.0 FTE practice nurse. The GPs have admitting rights to the Mango hospital for private patients. Three of the private GPs have obstetric and anaesthetic qualifications and are currently providing these services for private patients. The GPs are keen to continue to provide these services but are faced with increasing medical indemnity premiums, which reduces the margin on the feasibility of continuing to provide these services.

The hospital doctors are on-call 1 in 2, and second on-call for emergencies. The private GPs operate a 1 in 4 on-call roster. In the past the private general practice had shared the second on-call roster with the hospital doctors but have withdrawn from this following ongoing disputes with the local District Health Service over payment. The salaried hospital doctors are relieved by rural relievers from Pineapple Hospital, and these are usually PGY2 doctors. Analysis of retrieval data indicated spikes in retrievals to Pineapple when hospital doctors are on leave. In some emergency situations e.g., severe road trauma, and premature labour, the local GPs have been called in to assist the relieving doctor.

Guava is located 50 km from Mango, and has a population of 800 people. Guava is considered a retirement location with its proximity to fishing and the beach, and hence has an older community profile. Health services in Guava consist of a solo private general practice, Queensland Ambulance Station (staffed by one officer) and HACC services managed by the local council. The solo general practice employs a part-time nurse (0.5 FTE) and receptionist, and the doctor is constantly on-call while in the town.

The local Division of General Practice provides a visiting diabetes education service to Mango on a fortnightly basis, and Guava on a monthly basis.

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115 Commonwealth Dept of Health and Aged Care (2001) The Aboriginal and Torres Strait Islander Coordinated Care Trials National Evaluation Summary
**Applying the Planning Matrix to the Fruity Model (Multidisciplinary Team)**

### Recruitment

| Community          | • The Fruity Regional Health Council (FRHC) links with RWA to recruit doctors to the cluster. The FRHC chairs the on-site interview process for doctors interested in working in the cluster, and undertakes orientation of doctor(s) and family across the cluster through social activities, site visits  
|                    |   • Assist doctor(s) and family identify community buddy/mentor  
| Regional           | • Division participates in the interview and recruitment process.  
|                    |   • Division developed a profile of the region identifying local and visiting health and community services, current and regularly updated list of specialist contacts, retrieval processes  
| State              | • RWA drives the advertising and recruitment process for the cluster in partnership with FRHC, implementing international recruitment best practice, and targets Australian and overseas-trained doctors  
|                    |   • Undertakes assessment of skills of interested doctors against cluster needs/requirements, identifies skills gaps and links to training/upskilling opportunity, assist OTD doctor with medical board registration and issue of provider number  
|                    |   • Work with cluster communities to undertake cross cultural settlement education for the communities about the culture from which the overseas doctor(s) have come  
| National           | • Dept of Immigration and Dept of Health and Ageing have developed standardised methodology for OTD placement and pre-requisites for obtaining residency  
|                    |   • By this stage, the Dept of Immigration has allowed TRDs and their families access to Medicare and public education, and removed credit restrictions  
|                    |   • Vocational training programs include assessment of aptitude for rural practice  
|                    |   • DoHA defined incentives for rural practice that can be advertised to medical students, PGY 1-3 doctors and experienced doctors. These could include opportunity for specialist training place following rural placement, HECs debt reduction, retention payments after period of service

### Employment Conditions

| Community          | • Shared on-call across the cluster resulting 1:7 1st on-call (including RAN and Ambo/physician assistant)  
|                    |   • Internal relief established, with Apple doctors covering Tomato doctor and RAN  
|                    |   • Good quality housing built or refurbished for the 6 doctors across the cluster. The doctors rent these directly from the owner  
|                    |   • Doctors remunerated on contractual basis to the FRHC  
| Regional           |  
| State              |  
| National           |  

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### Practice Viability/ Support

| Community | • The general practice facility is owned by Queensland Health, leased by FRHC  
|           | • Facility and equipment meet accreditation standards  
|           | • Day care facilities operate in both Apple and Tomato. Work with child care facilities to develop emergency childcare roster for doctors with children to meet on-call commitments |

| Regional | • Division has a corporate arm established as a service company. It employs the practice reception and nursing staff at both Apple and Tomato. Division responsible for recruitment and training of practice staff. Line management process clearly defined.  
|          | • Computers owned by Division and located in general practice clinics. All patient records computerised and practices networked. (is this relevant if electronic health record?)  
|          | • FRHC pay service fee to Division to run practice. Division has negotiated agreement with QH for doctors to service Apple hospital and provide emergency services at Tomato |

| State | • RWA negotiates with QH and/or private providers to establish best deal and fastest response for pathology and radiology services  
|      | • Maintenance of equipment and trained staff at Apple hospital to support minor procedural work |

| National | • Electronic health record system operational  
|         | • Medicare review remunerates for practice nurse activity (acknowledging wages and consumables used) and/or practice item number  
|         | • Professional indemnity reforms in place limiting liability of doctors to encourage maintenance of procedural work |

### Relief/ Peer Support

| Community | Regional | • Instigate peer support networks e.g., monthly teleconference to link Tomato doctor with Apple doctors and other doctors working in remote practice within region  
|           |         | • Establish regional locum position to improve locum availability at high demand periods or unexpected illness/events |

| State | • Maintain adequate locum pool to improve locum availability at high demand periods or unexpected illness/events  
|      | • Negotiate with tertiary hospitals to rotate PGY2 and PGY 3 JHOs into rural general practice to promote exposure to rural general practice |

| National | • ARRWAG in conjunction with RWAs develop and implement national system of skills assessment for locums including TRDs and JHOs |
### CME/ Training

| Community | • Registrar training incorporated into working hours. Identified supervisor within Apple practice, or remote supervision through UDRH and Remote Vocational Training Scheme. Allocated training and supervision time scheduled  
| | • TRDs undertaking FRACGP as component of “Docs for the Bush” allocate time for study within schedule  
| Regional | • GP Registrar training pathway negotiated with Regional Training Consortium  
| | • Within Division business plan, develop and implement an educational program with modules from RWA procedural workshops and courses that can be delivered at a local level to doctors, nurses, ambulance officers, indigenous health workers and other members of a local health team in conjunction with MICRRH  
| | • Conduct cultural awareness training for new doctors, community-based nurses, ambulance officers and other health professionals. Identify local indigenous people to provide local context to cultural awareness and safety  
| State | • Identify opportunities for regionally accessible emergency skills and procedural skills training and placements for Apple and Tomato doctors at nearby regional centres, facilitating GP access through provision of locum to practice  
| National | • ACRRM and RACGP instigate program of learning plans/contracts to assist doctors develop and maintain procedural skills, attain fellowship

### Specialist and other health professional support

| Community | • FRHC undertakes 3 year strategic planning process to identify health priorities in the cluster and develop programs to respond to need through strategies such as direct employment, purchaser provider, brokerage  
| | • FRHC clearly identifies the roles, responsibilities and linkages between various health professionals working within the multidisciplinary team to ensure services delivered effectively and in coordinated manner linking with schools, aged care, child care, outlying properties and out stations  
| | • FRHC has a quality assurance process in place to evaluate multidisciplinary health service delivery with respect to access, utilization and clinical management  
| Regional | • Integrate and coordinate services provided by district, Division, regional health services and FRHC to meet the health priorities of cluster  
| State | • Legislation adopted to recognize alternative practitioners with appropriate clinical governance processes to work in areas of medical shortage  
| | • Develop salary scales and awards for physician assistants and other alternative practitioners (eg nurse practitioners)  
| | • Develop salary scales and awards for specialist nursing positions to work in community based positions
WHAT MODEL COULD BE DEVELOPED TO IMPROVE THE PROVISION OF PROCEDURAL SERVICES TO MANGO, AND PRIMARY CARE SERVICES TO GUAVA?

The total population of the Mango Shire and the adjacent Guava township is just under 10,000. This indicates that the region has a GP:population ratio of 1:1,430 (inclusive of the hospital doctors as they also provide primary care services), and supports the local doctors reports that they have a heavy workload, particularly when inpatient and after-hours commitments are considered.

RESTRUCTURING CURRENT SERVICE DELIVERY

The shire of Mango and the township of Guava value the services provided by their local doctors. However, many of the members of the communities are acutely aware of the fragility of the services.

ISSUES SPECIFIC TO MANGO

- Local private doctors considering ceasing procedural medicine because of marginal income of obstetrics relevant to increasing indemnity and number of private deliveries
- Access to public obstetric services unreliable due to recruitment of salaried doctors who may or may not have procedural skills
- Concern over ‘competency’ of relievers to manage emergencies such as road trauma and premature deliveries
- Long waiting times for appointments with private GPs
- Concern that local doctors will “burn-out” and move to easier location

ISSUES SPECIFIC TO GUAVA

- Local doctor constantly on-call and showing signs of burn-out
- Large older population with chronic health problems
- Public transport expensive and difficult for pensioners to access medical services in Mango
- Access to allied health services limited to diabetes education for Guava even though population has high prevalence of diabetes and cardiovascular disease
- The Guava practice is financially marginal because of the high number of pensioners and health care card holders in the town
- Queensland Ambulance Service concerned that the local officer is largely under-utilized and considering the discontinuation of the position in Guava

Members of the local communities, shire representatives, Queensland Ambulance Service, and medical profession met with the local Division of General Practice and District Health Service to look for a solution to the impending problem of maintenance of procedural services and primary care services in the Mango and Guava communities.

7.3.6 THE TROPICAL SOLUTION

The Tropical Solution had implications for the hospital, the Mango general practice and the Guava practice. The District Health Service “employed” the Mango general practice to fill the Medical Officer position at the Mango hospital. The Mango general practice undertook this, using existing doctors to share the inpatient, outpatient, procedural and emergency care, working with the Medical Superintendent. The District Health Service cashed out the Medical Officer position and these funds were used to employ the Mango practice to fill the Medical Officer position. This restructure resulted in the local general practice providing internal relief negating the need to use less experienced rural relievers to cover the Medical Superintendent relief. As the Mango GPs were now also providing public procedural services (obstetrics, anaesthetics and surgery) they had greater opportunities to maintain their skills, and public services were indemnified by the state health department.

The restructure of the Medical Officer position also offered the opportunity for the Mango GPs and Medical Superintendent to establish an integrated after hours and on-call roster. This resulted in all the doctors working on a common roster of 1 in 5, with second on-call provision. In order to maintain the provision of private services the local Division of General Practice
successfully negotiated with the Commonwealth to issue a provider number to the Mango hospital facility in order for the Medical Superintendent to provide after-hours services to private patients, when he was on-call.

The restructure in Mango would result in greater workload for the existing Mango GPs. This could be managed through the recruitment of a fifth doctor. The Guava GP was keen to be part of a more viable practice and sought to reduce her after-hours commitments, but recognized that many of the Guava patients would have difficulty in accessing Mango. A solution was that the Guava GP would re-locate to Mango, and the Mango general practice would incorporate Guava as a branch practice. The local Division of General Practice negotiated with the Guava Shire to takeover the lease of the Guava practice, with the practice paying the Shire a fixed fee for use of the premises. Without a full-time general practitioner in Guava, the Queensland Ambulance Service recognized that the Ambulance Officer position would be better utilized if the position were upgraded to physician assistant. GP supervision would be provided by the Mango general practice through telephone contact and visiting GP service 2 days/week. The practice nurse position was increased to a full-time position, working with both the GP and the ambulance officer/physician assistant. In time it is planned that the QAS station is refurbished to provide two consulting rooms so that all health services in Guava are co-located.

After hours calls in Guava are directed through to the Mango hospital where they are triaged by the nurse and managed by the local doctor on call. If there is the need for the Guava patient to have medical assessment the doctor on-call liaises with the physician assistant (permanently on second on-call) and is transported to the Mango hospital if hospitalization is required.

Even with the relocation of the Guava doctor to Mango, there is not a net increase in GP services in the region. With the variety of work the Mango practice undertook it was approached by the local GP training Consortium to become a training practice. This was seen as part of the solution to the workforce requirements.

However, in addition the practice increased the practice nurse hours to 2 FTE, providing a nurse to GP ratio of 1:3. The practice nurse positions were restructured so that 0.8 FTE undertook general practice nurse duties in immunizations, dressings, assisting with minor procedures, 0.7 FTE was devoted to chronic disease management and 0.5 FTE mental health nurse was employed to undertake ongoing counseling. Nurse run chronic disease clinics and mental health counseling released GP time to manage acute presentations and changes in treatment plans. The introduction of Medicare Plus Mark 2 (which included practice nurse item numbers) enabled the employment of nurses to enhance and extend GP services.

The local Division of General Practice recognized that it could improve access to allied health services in the region through the More Allied Health Services Program. The diabetes educator that visited Guava changed her pattern of work to include upskilling of the practice nurse in diabetes education to enable ongoing education and monitoring of patients between her monthly visits. In addition, the Division contracted a private podiatrist and dietitian from Pineapple to undertake a quarterly visit to Guava to conduct diabetes and cardiovascular health clinics in conjunction with the local practice.

The QRMSA in conjunction with the local Division commenced a bi-monthly procedural update using material “modularized” from the QRMSA procedural workshops. These are targeted at the GPs, Medical Superintendent, and hospital nurses and ambulance officers.

**Strengths of the Model**

- Net increase in doctors servicing the region
- Reduction in on-call commitments for doctors, reduction from 1st on-call to second on-call for ambulance officer/physician assistant in Guava
- Internal relief within the Mango hospital, removing the reliance on rural relievers and associated costs for Queensland Health
- Increased opportunity for Mango GPs to maintain procedural skills
- Increased in-patient management
• Ongoing provision of GP services to Guava that was under threat of losing service
• More efficient use of QAS resource
• Expanded role of practice nurses to reduce workload on GPs and free up time to manage acute presentations

**RESOURCES REQUIRED**
- The only additional position is the GP registrar and given the population of the region, this should be feasible under fee for service. In addition, the guaranteed income from the cashed out Medical Officer position will subsidize cost of the GP registrar
- Increased remuneration for Physician Assistant, and given that these positions are extending the role of general practitioners, Medicare item numbers could apply. Alternatively, the Commonwealth recognizes the increased remuneration for these positions and funds QAS directly to support the position of physician assistant in rural and remote areas
- The Ambulance Officer/physician assistant position will be remunerated at a higher rate in line with additional responsibility

### Table 11. Comparison of Services Across Models

<table>
<thead>
<tr>
<th></th>
<th>Old Model</th>
<th>New Model</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mango</td>
<td>Guava</td>
</tr>
<tr>
<td>Population</td>
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<td>Hospital doctors</td>
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<td>GPs</td>
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</tr>
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<td>Practice Nurses</td>
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<td>1</td>
</tr>
<tr>
<td>Physician Assistant</td>
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</tr>
</tbody>
</table>

### 7.3.7 Funding the Model
The key changes to current funding requires:
- Cashing out of the Medical Officer position by Queensland Health to “employ” the Mango practice to provide hospital services
- Access to Medicare for the Mango Hospital facility (under similar conditions to Medicare access for Aboriginal Community Controlled Health services) to enable the Medical Superintendent to bill private patients after-hours, as part of the integrated after hours service
- Revision of Medicare Plus to establish a practice nurse or practice item number for rural and remote areas allowing practice nurses to provide specific services that do not require the patient to see the GP, and recognize the higher level skill of the nurse
**Applying the Planning Matrix to the Tropical Solution**

<table>
<thead>
<tr>
<th>Recruitment</th>
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| **Community** | • The Mango Shire Council links with the local Division of General Practice and University Department of Rural Health to seek funds to build/purchase accommodation for GP Registrar  
• Assist GP Registrar and family identify community buddy/mentor |
| **Regional** | • Division develops a profile of the region identifying local and visiting health and community services, current and regularly updated list of specialist contacts and retrieval processes  
• District Health Service ensures Medical Superintendent position is filled by doctor with necessary procedural skills to meet minimum level of services required within the Mango and Guava Shires |
| **State** | • QRMSA undertakes strategic marketing of rural practice to medical students and PGY 1-3 |
| **National** | • ACRRM and RACGP develops selection criteria into training program that recognizes aptitude for rural practice |

<table>
<thead>
<tr>
<th>Employment Conditions</th>
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</table>
| **Community** | • Integrated public/private on call roster operational across Mango and Guava resulting in 1 in 6, 1st on-call; Ambo/physician assistant in Guava second on-call only  
• Internal relief established within Mango  
• Good quality housing built or refurbished for GP registrar (housing stock in good supply in Mango, and private GPs rent or purchase directly) |
| **Regional** | • GPs and GP registrar remunerated on fee for service basis, and practice also cross-subsidized by contract with District Health Service |
| **State** | • Hospital nurses trained in triage to effectively and efficiently manage after-hours calls and presentations |
| **National** | • Commonwealth revisit Medicare to enable salaried doctors access to after-hours item numbers when participating in an integrated public/private after hours roster  
• Procedural GPs subsidized to maintain professional development requirements to meet college standards for procedural medicine |
### Practice Viability/Support

| Community                      | • General practice facility is leased by Guava Shire with Mango practice paying agreed rent  
|                               | • Guava and Mango facilities meet accreditation standards  
|                               | • Day care facilities operate in Mango. Division liaises with child care facilities to develop emergency childcare roster for doctors with children to meet on-call commitments |
| Regional                      | • Division conducts regular training for practice staff (practice management, reception skills), and practice nurses  
|                               | • Division links allied health staff (employed/contracted under the MAHS program) to practices for direct patient consultations and to upskill and train practice nurses  
|                               | • Division provides ongoing ITIM support to the Mango and Guava practice |
| State                         | • Maintenance of Mango hospital facilities and trained nursing staff to support continued provision of procedural services |
| National                      | • Commonwealth revisits Medicare to introduce practice item numbers that offset salaries (and consumables) of practice nurses to enable the extension of GP/primary care services in rural and remote areas  
|                               | • Professional indemnity reforms in place limiting liability of doctors to encourage maintenance of procedural work  
|                               | • Electronic health record system operational and supports “movement” of patients between Guava and Mango as well as supporting and supervising physician assistant in Guava |

### Relief/Peer Support

| Community                      | Although Mango has established internal relief system, locums may still be required at high demand period or when unexpected illness/event |
| Regional                      | • Establish regional locum position to improve locum availability at high demand periods or unexpected illness/events |
| State                         | • Maintain adequate locum pool to improve locum availability at high demand periods or unexpected illness/events  
<p>|                               | • Negotiate with tertiary hospitals to rotate PGY2 and PGY 3 JHOs into rural general practice to promote exposure to rural general practice |
| National                      | • ARRWAG in conjunction with RWAs develop and implement national system of skills assessment for locums including TRDs and JHOs |</p>
<table>
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<tr>
<th><strong>CME/ Training</strong></th>
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<tbody>
<tr>
<td><strong>Community</strong></td>
<td>• Registrar training incorporated into working hours. Identified supervisor within Mango practice. Allocated training and supervision time scheduled</td>
</tr>
</tbody>
</table>
| **Regional** | • GP Registrar training pathway negotiated with Regional Training Consortium. Academic member of consortium negotiates learning plan and contract between the GP supervisor and GP registrar  
• Within Division business plan, develop and implement an educational program with modules from RWA procedural workshops and courses that can be delivered at a local level to doctors, nurses, ambulance officers, indigenous health workers and other members of a local health team in conjunction with UDRH  
• Conduct cultural awareness training for new doctors, community-based nurses, ambulance officers and other health professionals. Identify local indigenous people to provide local context to cultural awareness and safety  
• Facilitate local triage training for hospital-based nurses with conjoint sessions with local GPs and salaried medical officer(s) to establish protocols |
| **State** | • Identify opportunities for regionally accessible emergency skills and procedural skills training and placements for Mango doctors at nearby regional centres, facilitating GP access through provision of locum to practice  
• Identify nurse triage training programs applicable to rural communities and contract to provide training across the state |
| **National** | • ACRRM and RACGP instigate program of learning plans/ contracts to assist doctors develop and maintain procedural skills, attain fellowship |

<table>
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<tr>
<th><strong>Specialist and other health professional support</strong></th>
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| **Community** | • Queensland Ambulance in collaboration with local Division and GP undertake series of information sessions using variety of media to promote concept of health team including physician assistant, practice nurse role and GP. Promote mechanism of access, model of care  
• Health team establishes linkage with school, HACC providers and visiting allied health professionals to develop local programs to meet local health problems |
| **Regional** | • Integrate and coordinate services provided by District, Division, and Queensland Ambulance to meet the health priorities of Mango and Guava  
• Facilitate the establishment of protocols for patient record documentation, clarification of role and responsibilities of physician assistant and practice nurses (advanced skills)  
• Identify ongoing training requirements of health team and develop programs to meet knowledge/ attain pre-requisite level of competency |
| **State** | • Legislation adopted to recognize alternative practitioners with appropriate clinical governance processes to work in areas of medical shortage  
• Develop salary scales and awards for physician assistants  
• Review salary scales for nurses following attainment of triage competencies |
Health service provision in very small remote communities in Queensland is usually focused around a nurse-run clinic with visiting general practice type medical services provided by the Royal Flying Doctor Service or a GP residing some distance away. The health clinics can be auspiced and managed by a Queensland Health District Health Service, or another agency. Many of these agencies have linkages with a church organization. In locations where Queensland Health does not directly provide the service, it does contribute some funds for service provision and pharmacy.

Over the last 2-3 years, Queensland has seen the withdrawal of some of these agencies from the management of remote clinics, resulting in communities seeking other organizations to provide this remote nursing service. Desert is one such shire that must look for a new agency to support the primary health care clinics that operate in two communities within its jurisdiction. The agency that had provided services to Desert Shire determined that the ongoing difficulties in recruiting nursing staff, rising staffing costs and increasing accreditation requirements meant that it could no longer operate in the Desert Shire.

The Desert Shire is in outback Queensland. Within the Desert Shire there are two communities separated by 200km of dirt road. Community A has a population of 160 and Community B has a population of 120. Indigenous Australians represent 40% of the Shire’s population. These communities experience a large influx of tourists during the winter months. Each community has a primary health care clinic staffed by a remote area nurse. The RFDS provides a fortnightly GP clinic to each site. Other visiting services include the Well Women’s Health Clinic, and monthly allied health services provided through a regional health services program managed by the local Division of General Practice. The local District Health Service funds an aboriginal health worker, working across the entire shire.

Whilst the residents of the Desert Shire appreciated the work of the nurses running the clinics, and agency providing the service, they had a number of concerns.

**WHAT MODELS COULD BE DEVELOPED TO IMPROVE THE VIABILITY OF PRIMARY CARE SERVICES IN THIS SHIRE?**

The Desert Shire is a progressive organization, representing resilient communities that have had to take the initiative to expand their operations to take advantage of new markets and opportunities in order for the community and enterprises to prosper in this remote part of Australia. Therefore the Desert Shire debated whether to take over the auspice and management of its own primary health care service. The arguments underpinning this debate were that the Shire was the organization elected by the local communities to manage services; it was an organization that had the processes and systems in place to manage large sums of money and specific projects and programs; it was the largest local employer, and had the systems in place to manage staff. In addition the Shire already provided in kind support to the health services through assistance with the maintenance of buildings and infrastructure.

The advantages to the Shire auspicing and managing the health services included:

- Opportunity to direct models of service delivery to meet local need
- Guarantee that funds raised locally would be directed back into the service
- Opportunity to promote integration of resident nursing services with visiting health and community services, broadening the focus of service provision to encompass primary health care
- Opportunity to develop strategies to support the recruitment and retention of nursing staff
Systems for clinical governance of the remote area nurses and professional and peer support need to be considered.

**The Desert Solution**

Under the Desert Solution the Shire became the fund holder for state and commonwealth allocations to the local region. In addition to these funding sources the Desert Shire directed the major local annual fundraising activity toward the provision of an additional nursing position. Tourists and non-residents of the shire were charged a service fee, which supplemented income to the clinic and offset the cost of the third nursing position. The three nursing positions covered the Desert Shire. One position provided clinic services at Community A, one position provided clinic services at Community B, and the third position was a relieving position for the clinic nurses, as well as providing clinics at the larger stations on a scheduled basis, which had been identified as a strategy to provide health promotion and screening services for the men, women and children residing on properties.

The Shire recognized the need for clinical governance and professional support for the remote area nurses, and did not want to employ the health professionals directly. Therefore, the Shire called for Expressions of Interest from agencies with experience in providing primary health care services in remote areas to supply nursing services based on the model developed by the Shire in conjunction with its residents. The contracting in of services offered the remote area nurses the professional support and governance required, but ensured that the Shire had direct input into how services were delivered and able to raise issues with the agency if required.

The Desert Shire took over full responsibility for the maintenance of the clinic facilities, and accommodation for the three nursing positions. The Shire sought assistance from the local Division of General Practice to assess the facilities and identify the necessary work required so that the facilities and systems met accreditation standards. The Shire saw the opportunities of exposing medical, nursing and allied health students to remote practice as a mechanism for increasing the pool of people ready to work in rural and remote health for a period of time. Therefore it established links with the regional University Department of Rural Health and became a site for student placements.

With the assistance of the Division’s pharmacist, the Shire established a small commercial pharmacy at the clinic. The pharmacist assisted the nursing clinics to establish the systems to support pharmacy dispensing, and provided regular upskilling of the remote area nurses in pharmacy supply and pharmacy counseling through monthly visits to the Shire in conjunction with the visiting allied health service. Queensland Health continued to provide drugs to the pharmacy as part of its support to health service provision in the Desert Shire. In addition to providing visiting pharmacy services in the two communities, the pharmacist also undertook property visits with the third nurse several times a year to undertake home medication reviews of elderly people residing on properties, and support some of the health promotion activities conducted by the nurse.
## Applying the Planning Matrix to the Desert Solution

<table>
<thead>
<tr>
<th>Recruitment</th>
<th></th>
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<tbody>
<tr>
<td><strong>Community</strong></td>
<td></td>
</tr>
<tr>
<td>• Seek expressions of interest from agencies providing primary health care services in remote areas</td>
<td></td>
</tr>
<tr>
<td>• Hold local meetings to identify expectations of the remote area nurses and use as an opportunity to manage “unrealistic” expectations</td>
<td></td>
</tr>
<tr>
<td>• Describes model of service delivery required to meet needs of Desert Shire</td>
<td></td>
</tr>
<tr>
<td>• Participate in selection process with agency for remote area nurses</td>
<td></td>
</tr>
<tr>
<td>• Assist Remote Area Nurse(s) and family identify community buddy/mentor to contexturalize cultural issues (both indigenous specific and community specific)</td>
<td></td>
</tr>
<tr>
<td>• Hold meet and greet in Community A and B when nurses recruited</td>
<td></td>
</tr>
<tr>
<td><strong>Regional</strong></td>
<td></td>
</tr>
<tr>
<td>• Division develops a profile of the region identifying local and visiting health and community services, current and regularly updated list of specialist contacts and retrieval processes</td>
<td></td>
</tr>
<tr>
<td>• Division and District Health Service support Shire in developing model of care for the Shire</td>
<td></td>
</tr>
<tr>
<td>• Division and District Health Service work with Desert Shire to select agency following submissions of Expressions of Interest</td>
<td></td>
</tr>
<tr>
<td><strong>State</strong></td>
<td></td>
</tr>
<tr>
<td><strong>National</strong></td>
<td></td>
</tr>
<tr>
<td>• QRMSA undertakes strategic marketing of the Desert Shire to Agencies</td>
<td></td>
</tr>
</tbody>
</table>

### Employment Conditions

<table>
<thead>
<tr>
<th>Community</th>
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</thead>
<tbody>
<tr>
<td>• Internal relief established within the Desert Shire through 3 nursing positions, with relieving position also having an outreach role to properties</td>
<td></td>
</tr>
<tr>
<td>• Good quality housing provided by Desert Shire for each nursing position</td>
<td></td>
</tr>
<tr>
<td>• Remuneration meets state awards and includes range of incentives including allocation of time for paid professional development, accommodation at nominal rent, professional mentoring, communications subsidy, childcare/ nanny subsidy</td>
<td></td>
</tr>
<tr>
<td><strong>Regional</strong></td>
<td></td>
</tr>
<tr>
<td><strong>State</strong></td>
<td></td>
</tr>
<tr>
<td><strong>National</strong></td>
<td></td>
</tr>
</tbody>
</table>
### Practice Viability/ Support

| Community | • Health clinic facilities owned by Desert Shire  
• Health clinic facilities meet accreditation standards  
• Health clinics have computerized patient information management system  
• Shire liaises with local family day care providers to develop emergency childcare roster for nurses to meet on-call commitments |
| Regional | • Division identifies appropriate information management systems to Desert Shire  
• Division conducts regular training of clinic nurses in information management and technology  
• Division links allied health staff to clinics for direct client consultations and upskill remote area nurses to continue aspects of therapy for clients  
• Division pharmacist assists clinics to establish dispensing pharmacy with appropriate software for management and ordering  
• Division pharmacist undertakes inservices with remote area nurses in pharmacy counseling  
• Division reviews facilities and systems and assists Desert Shire prepare clinics for accreditation |
| State | • QRMSA lobbies at state level to ensure telecommunications infrastructure supports videoconference to facilitate access to radiology services and specialist support |
| National | |

### Relief/ Peer Support

| Community | Although Desert Shire has established internal relief system, locums may still be required when unexpected illness/event, therefore need to establish linkage with agency nursing organization to provide for such occasionsEnsure remote area nurses linked to peer organizations such as CRANA |
| Regional | • Establish regional nurse locum position to improve locum availability at high demand periods or unexpected illness/events  
• Establish peer support network for remote area nurses working across the region. Nurses participating in the network may work for various agencies including Qld Health, Division of General Practice, Church organizations and other agencies |
<p>| State | |
| National | • CRANA links with remote area nurses across all agencies providing professional development, mentoring and support networks |</p>
<table>
<thead>
<tr>
<th>CME/Training</th>
</tr>
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<tbody>
<tr>
<td><strong>Community</strong></td>
</tr>
<tr>
<td>• Remote Area Nurse training and upskilling incorporated into working hours.</td>
</tr>
<tr>
<td>• Identified supervisor within agency, with allocated training and supervision time scheduled (can be via teleconference or videoconference)</td>
</tr>
<tr>
<td><strong>Regional</strong></td>
</tr>
<tr>
<td>• Remote Area Nurses negotiate learning plan and contract with supervisor and identified education provider such as CRANA</td>
</tr>
<tr>
<td>• Within Division business plan, develop and implement an educational program with modules from RVPA procedural workshops and courses that can be delivered at a local level to doctors, remote area nurses, ambulance officers, indigenous health workers and other members of a local health team in conjunction with UDRH</td>
</tr>
<tr>
<td>• Conduct cultural awareness training for new doctors, community-based nurses, ambulance officers and other health professionals. Identify local indigenous people to provide local context to cultural awareness and safety</td>
</tr>
<tr>
<td><strong>State</strong></td>
</tr>
<tr>
<td>• Identify opportunities for regionally accessible emergency skills training and placements for Remote Area Nurses at nearby regional centres</td>
</tr>
<tr>
<td>• Identify nurse triage training programs applicable to rural communities and contract to provide training across the state</td>
</tr>
<tr>
<td><strong>National</strong></td>
</tr>
<tr>
<td>• CRANA instigate program of learning plans/contracts to assist nurses develop and maintain skills appropriate to remote practice</td>
</tr>
</tbody>
</table>
CHAPTER 8: CONCLUSION

This paper has sought to understand why rural and remote Australia, and Queensland in particular, is experiencing a medical workforce shortage, and how this shortage impacts on communities and health professionals, in order to develop solutions to support sustainable rural practice.

The literature review undertaken in this study indicates that the trigger for the rural crisis was a result of the convergence of federal government policies in the early 1990s that sought to address the oversupply of general practitioners in metropolitan areas through restricting medical student intake, reducing GP training places, applying provider number restrictions to overseas trained doctors, and limiting the issue of provider numbers to doctors participating in or completed a vocational training program. Whilst some of these measures sought to promote uptake of rural practice by overseas trained doctors, and there has been a net increase in doctors working in rural areas by 11%, it appears to have created a fragile system with high mobility of doctors.

The current factors contributing to the rural medical workforce shortage, are largely social and demographic i.e., changing gender balance with increased number of women in the medical workforce, ageing general practice workforce, and changing work patterns of younger doctors seeking to work shorter hours, continue to exacerbate the shortage. Current government policies to increase the number of medical student places may not result in a proportional increase in services provided when consideration is given to recent HIC data that shows that in Queensland 58% of urban general practitioners work less than 0.5 fulltime workload equivalent. Comparable rural data shows that 68% of doctors billing HIC work less than 0.5 fulltime workload equivalent but this data is confounded by locums and rural relievers providing short-term relief in rural areas].

Evidence that undergraduate rural training, postgraduate training and medical school entry criteria favouring rural students is associated with an increased likelihood of being a rural GP underpins recent university policies for preferential selection of students with a rural background as part of a long-term strategy to address the rural medical workforce shortage. However, this is obviously only part of the solution as there continues to be a need to re-think service delivery models that address the factors of why doctors leave rural practice i.e., heavy workload and on-call commitments, professional isolation and lack of professional development opportunities, lack of locum relief. Family factors i.e., opportunities for spouse employment and children’s education, and community resource factors are significant contributors to poor retention indicating that in addition to revised service delivery models community development action is also required.

Medicine is not the only health profession experiencing difficulties recruiting and retaining a workforce in rural and remote areas. Nursing, allied health and ambulance services experience similar issues. Currently Queensland Health is seeking to restructure service delivery with emphasis on regionalization of acute services particularly for secondary and tertiary care, with an emphasis on primary health care in smaller communities. The drivers behind this restructure is the increasing technology and treatments that can be made available in tertiary facilities, and shorter lengths of stay; a greater focus on chronic disease prevention and management; sustainable service delivery underpinned by quality, safety, access, efficiency and effectiveness; workforce supply; and ageing population. The driver that appears to be missing is equity. A risk with the current

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119 Minutes of meeting between Queensland Health Outcomes Unit and QRMSA, October 2003.
Queensland Health Northern Zone Clinical Services Planning Framework is that the proposed mix of services available in rural and remote areas is based on population of the catchment areas and not on community need i.e., morbidity, geographical isolation. Whilst it is recognized that the current models in rural and remote areas continue to focus around hospital based services which have low occupancy but high running costs, there needs to be greater consideration to benchmarks for minimum services that promote equity for people living in rural and remote communities, and also reduce the risk of further rural decline.

This project has identified adaptations to existing models of rural medical service delivery that would improve the sustainability of medical practice. These adaptations have particularly focused around practice ownership and management, after hours and mechanisms to increase the critical mass of doctors to continue to provide a range of procedural and primary care services. The adaptations have sought to address identified factors contributing to poor recruitment and retention, and sustainable practice. The implementation of these adaptations requires removing the artificial barriers between state and commonwealth funded services facilitating integrated after hours rosters between private general practitioners and hospital doctors, a further review of Medicare rebates to promote greater use of practice nurses for work that will reduce general practitioner workload and increase capacity to manage acute and serious presentations.

The realities facing rural communities and those organizations seeking to support rural and remote health service delivery is that new models are required that make better use of existing resources i.e., human, financial and infrastructure. Clearly it is the residents of rural and remote communities who are affected by changes in the mix of services and mechanisms of service delivery. It is also the communities that are being increasingly called upon to support state and commonwealth initiatives to strengthen health service delivery through provision of local infrastructure. Therefore, communities must be central to and supported in decision-making regarding health service provision. This is occurring under the primary health care access program and should be extended across Queensland.

The project has described several new models for further development underpinned by:

- Community participation, and possibly community control
- Development of multidisciplinary health teams that extend the role and responsibility of nursing and ancillary health professionals
- Creation of a new profession within Australia i.e. physician assistant
- Funds pooling and resource pooling to more efficiently and effectively deliver services
- Blurring of the boundaries between state and commonwealth funded services in order to deliver services in a manner more sustainable for individual practitioners

A model is just that – a model, but seeks to show that an enhanced mix of health services can be provided with often the same resources in a more sustainable manner if we look outside the box.

As has been stated in this document a number of times, one model will not fit all. Perhaps that is one of the contributing factors to why Queensland and other states continue to face ongoing problems in health service delivery in rural and remote areas. Health service delivery in rural and remote Australia is constrained by the contractual agreements between the Commonwealth and States leading to inflexibilities that do not easily allow local solutions to local problems.
<table>
<thead>
<tr>
<th>Suggested Improvement</th>
<th>Responsibility Level</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communities are central to decision making regarding the type and mechanism of health service delivery to meet local need and priorities. Communities are supported to make these decisions by drawing on the expertise available from agencies including local Divisions of General Practice, Rural Workforce Agency and district health services.</td>
<td>Community</td>
<td>Divisions of General Practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Queensland Rural Medical Support Agency</td>
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<tr>
<td></td>
<td></td>
<td>District Health Services</td>
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<tr>
<td>The artificial boundaries created by state and federal health funding are removed to promote more efficient, effective and sustainable models of health service delivery in rural and remote areas. Medicare is reviewed to remunerate hospital nurses to triage and support private general practitioners in the provision of after hours care in rural and remote areas. Health professionals that support and extend the role of the general practitioner are appropriately remunerated through Medicare by specific item numbers or practice item numbers in rural and remote areas.</td>
<td>National/ State</td>
<td>Commonwealth Department of Health and Ageing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Queensland Health</td>
</tr>
<tr>
<td>Restructuring of health services funded and delivered by either state or commonwealth governments are underpinned by community participation, equity of access, timeliness and effectiveness, longer-term sustainability and quality.</td>
<td>National/ State/ Regional</td>
<td>Commonwealth Dept of Health and Ageing</td>
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<tr>
<td></td>
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<td>District Health Services</td>
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<tr>
<td></td>
<td></td>
<td>Divisions of General Practice</td>
</tr>
<tr>
<td>As Australia will continue to rely on overseas trained doctors for primary care service delivery in rural and remote areas in the foreseeable future, sponsoring organizations will implement international best practice recruiting processes, undertake skills assessment and seek to match the doctor and family to a community. In addition, the length of bonded service in remote communities is inversely proportional to the isolation of the community.</td>
<td>National/ State</td>
<td>Commonwealth dept of Health and Ageing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Queensland Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Queensland Rural Medical Support Agency</td>
</tr>
<tr>
<td>Target the marketing of rural general practice to medical students, and PGY1 and PGY2 doctors, promoting new models that address workload and lifestyle factors, and multidisciplinary health service delivery.</td>
<td>State/ Regional</td>
<td>Queensland Rural Medical Support Agency</td>
</tr>
<tr>
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<td></td>
<td>Divisions of General Practice</td>
</tr>
<tr>
<td>Develop mechanisms or tools to assess the aptitude of Australian and overseas trained doctors for rural and remote practice, and cross-cultural adaptability of the doctor and family.</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>Increase the size, and improve quality of the locum pool by investigating strategies such as regional-based locums, on-site supervision of rural relievers, and increased collaboration between Queensland Health and the QRMSA on provision of locum services.</td>
<td>State</td>
<td>Queensland Rural Medical Support Agency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Queensland Health</td>
</tr>
<tr>
<td>Suggested Improvement</td>
<td>Responsibility Level</td>
<td>Agency</td>
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</tr>
<tr>
<td>Universities continue the policy of preferential selection of students from rural backgrounds and strengthen rural undergraduate and post-graduate training opportunities linking closely with other health professionals to foster and facilitate the concept of functional multidisciplinary health teams.</td>
<td>National</td>
<td>Commonwealth Department of Health and Ageing Universities GPET ACRRM</td>
</tr>
<tr>
<td>Provision of financial support to rural practices to meet the infrastructure and time requirements to undertake teaching and training of GP registrars and medical students.</td>
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</tr>
<tr>
<td>Implementation of initiatives to promote the recruitment and retention of a multidisciplinary health team inclusive of nurses and allied health professionals, drawing on evidence provided by Fitzgerald et al. 2000, Director General of Health 2000, Stanley-Davies and Battye 2004.</td>
<td>State/ Regional</td>
<td>Queensland Health Service Districts Divisions of General Practice Other Non-government Organizations</td>
</tr>
<tr>
<td>Using a strategy derived from the teaching profession, development of professional exchange programs for experienced doctors, nurses and allied health professionals from urban areas to rural and remote locations to provide services for a period of time with guarantee of placement back to original position.</td>
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</tr>
<tr>
<td>Development and implementation of alternative practitioner models such as physician assistant to extend the care provided by a general practitioner/ primary care doctor. The development of this new profession in Australia requires resources to develop curriculum and pilot programs, and introduction of legislation to describe the role and responsibility of the profession.</td>
<td>National/ State</td>
<td>Commonwealth Department of Health and Ageing Universities</td>
</tr>
<tr>
<td>As a matter of urgency, the Commonwealth commissions rigorous evaluation of current rural and remote recruitment and retention strategies to determine where there is evidence of effectiveness and those strategies that require re-direction or diversion of resources.</td>
<td>National</td>
<td>Commonwealth Department of Health and Ageing</td>
</tr>
<tr>
<td>Commonwealth and State governments trial and evaluate a pilot of regional fund pooling of primary care services as described in this paper.</td>
<td>National/ State</td>
<td>Commonwealth Department of Health and Ageing Queensland Health</td>
</tr>
</tbody>
</table>

121 Stanley-Davies, P., & Battye, K. (2004). The Division with the vision: Development of the North West Qld Allied Health Service by North and West Qld Primary Health Care. Evaluation Stage I. Townsville: NWQPHC.
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### APPENDIX 1 – PLANNING MATRIX RURAL MEDICAL WORKFORCE MODELS: DOCTOR PROFESSIONAL FACTORS

<table>
<thead>
<tr>
<th>Level</th>
<th>Recruitment</th>
<th>Employment conditions</th>
<th>Practice Viability/support</th>
<th>Relief/Peer Support</th>
<th>CME/Training</th>
<th>Specialist and other health professional support</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Overseas trained doctors: Adopt international recruitment best practice processes (see Wolfe 2001) Clarify/standardise methodology for placement (OTD) &amp; residency status Australian doctors: Selection into training program – consideration of aptitude for rural practice Incentives for rural practice developed – OTDs e.g., residency/provider number; Aust HECs debt, specialist training place, professional exchange programs Strategic marketing of rural practice to medical students, PGY1-3 Minimum level of GP and procedural services benchmarked (and maintained) against community with consideration of morbidity, catchment population and remoteness</td>
<td>TRDs – removal of ambiguities e.g., immigration, credit arrangements, school fees, medicare access, clarified and promoted Remuneration package includes: • Relocation expenses • Leave isolation • Housing subsidy • Communications subsidy • 1 paid activity/yr childcare/nanny subsidy • Mentoring • Maternity/paternity leave • Assistance with indemnity premium OTDs and bonded scholarship holders duration of bonded stay proportional to isolation Procedural skills maintenance incentive After hours, reconfigure PIP to pay doctor Electronic health records/HealthConnect supports: shared care shared on-call streamline retrieval processes Recognition of role of practice nurse, interpretation of EPC items Practice nurse item number or practice item number Rural item numbers Professional indemnity reforms Remuneration for red tape Capitalisation (practice establishment and GPs retiring)</td>
<td>Increased flexibility of Rural Locum Relief program e.g., regional locum backfill in provincial area Skills assessment of locums including TRDs and JHOs Cultural awareness training – indigenous and rural/remote</td>
<td>Learning plans/contracts in conjunction with ACCRM, RACGP e.g., procedural skills, fellowships Assessment of new docs/TRDs/OTDs but need to train assessors and have them accredited CME/training modules include Oz medical system, HIC, Workcover etc Language assessment/communication skills Flexibility of RACGP/ACCRM program relevant to local/regional level Supporting attainment of FRACGP (OTD/TRD) Supporting indigenous health</td>
<td>Training program exposure to rural and remote Specialist as training provider Alternative practitioners and clinical governance models to assist in meeting worldwide medical shortage Alternative practice models – curriculum development Course accreditation</td>
<td></td>
</tr>
<tr>
<td>Level</td>
<td>Recruitment</td>
<td>Employment conditions</td>
<td>Practice Viability/ support</td>
<td>Relief/Peer Support</td>
<td>CME/Training</td>
<td>Specialist and other health professional support</td>
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</tr>
</tbody>
</table>
| State | Medical Board registration  
Mandatory cultural awareness training (indigenous and rural)  
Skills assessment  
Skills match to community  
Skills development to meet community need  
Recruitment philosophy – flexibility  
Supervised training  
Assist with HIC registration | State/regional management of after hours/on-call e.g., QAS triage to manage after hours | Infrastructure – access to pathology, radiology | Maintenance of adequate locum pool  
Affordability  
PGY2 and 3 – 6 months locum in general practice in supervised environment | Procedural skills training/placements offered at regional level  
Train the trainer:  
• Facilitators of training sessions  
• GP supervisors  
Time allocation for CME/ PD, for participants and presenters  
Individual learning personalised and localised  
Linkage to mentors  
Use Medical Education Officers to support and advocate for PGY1,2 and 3 to ensure balance between training and service delivery, and supervision during relieving terms (PGY 2 and 3) | Telehealth as a viable means of specialist support  
Centralised electronic bookings for specialists and visiting services  
MEOs/discipline training resource for JHOs in larger hospitals  
Joint training opportunities for medical students, nursing and allied health professions to build concept of multidisciplinary teams  
Legislation to recognize and define roles of alternative practitioners e.g., physician assistants, nurse practitioners  
Development of awards and salary scales for alternative practitioners  
Development of Medical preceptor program to support alternative practitioner models |
<table>
<thead>
<tr>
<th>Level</th>
<th>Recruitment</th>
<th>Employment conditions</th>
<th>Practice Viability/support</th>
<th>Relief/Peer Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional</td>
<td>Orientation to regional health services including primary, specialist, retrieval</td>
<td>Job sharing</td>
<td>Training practice staff – nurses, IHWs, reception (AAPM training)</td>
<td>Peer Support e.g., “Chats over the Back Fence” teleconference network</td>
</tr>
<tr>
<td></td>
<td>Participation in selection of health professionals</td>
<td>Flexible work e.g., registrars working across practices</td>
<td>ITIM support</td>
<td>Regional locum/regular locum consistency for patients</td>
</tr>
<tr>
<td></td>
<td>Development of community and regional profiles for new doctors and health professionals</td>
<td>Rostering on-call across geographical sites</td>
<td>Support development of crisis plan for doctor/practices</td>
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<tr>
<td></td>
<td></td>
<td>Regional after-hours triage and response service</td>
<td>Virtual practice management canvassed</td>
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<tr>
<td></td>
<td></td>
<td>Training nurses to triage</td>
<td>Division as corporate employer of practice staff</td>
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<td></td>
<td></td>
<td></td>
<td>Division assists doctors in negotiation of contracts with state health services</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Models have capacity for: Walk in/walk out</td>
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CME/Training

- Implement train the trainer “packaged” mobile modules from procedural workshops/courses with blocks conducted for doctors, nurses, allied health professionals, ambulance officers i.e., health teams
- Develop electronic resource kits, online learning resources, flexible learning
- MSOAP, MAHS, RHS – coordinate health teams locally
- Include RFDS, QAS in primary health teams
- Role of AHPs promoted
- Team building/working in teams
- Work with communities to identify health priorities and local needs
<table>
<thead>
<tr>
<th>Level</th>
<th>Community</th>
<th>Recruitment</th>
<th>Employment conditions</th>
<th>Practice Viability/ Support</th>
<th>Relief/Peer Support</th>
<th>CME/Training</th>
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<td>Participation in selection</td>
<td>On-site interviews</td>
<td>On-call co-operatives within community</td>
<td>Local ownership</td>
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## APPENDIX 2 – Planning Matrix Rural Medical Workforce: Family Factors

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<th>Level</th>
<th>Recruitment</th>
<th>Viability of community/community resources</th>
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| **National** | Family part of recruitment process; implement international best practice Human resource management (including Oz families as rural/remote different culture)  
Include in on-site interviews  
Link with National Family networks  
Promote equal power relationship (partner not the handbag) i.e., 2 professionals with skills/attributes for community  
Cultural awareness training (indigenous and rural) for partner and children | Lobby state education to improve quality of schooling in rural and remote, lobby with ICPA re:  
• Preparing teachers for rural and remote placements  
• Cultural awareness  
• Videoconference links to city schools to broaden curriculum choices  
• Accelerated learning opportunities for identified students  
Doctor and spouse health  
Develop strategies to support youth of professional service providers in rural and remote communities |
| **State** | Identify employment opportunities for partners across communities  
Skill match partner to community  
Career counselling/guidance for partner  
Identify training opportunities for partner (by distance)  
Advocacy | Regional community capacity building – linkages with DPI, Outback revival etc. |
| **Regional** | Identify local employment opportunities  
Strategies to support work from home opportunities including IT/internet support  
IT training  
Link with local and existing networks including Rural Women’s Network, ICPA, QRMFN  
Community buddy | Regional community capacity building – linkages with DPI, Outback revival etc. |
| **Community** | Community hosts regular meet and greet for new people coming to town  
Cross cultural settlement education – for communities with overseas trained doctor and for doctor and family | Local community development to improve resources within communities including: Developing family day care/child care facility, nanny opportunities, emergency childcare rosters  
Employment of tutors for secondary school education/to support distance education for local children |
APPENDIX 3: ORGANIZATIONS REPRESENTED AT THE TOWNSVILLE WORKSHOP

Australian College of Rural and Remote Medicine
Australian Medical Association, Queensland
Ayr Medical Group
Central and Southern Queensland Training Consortium
Ingham Medical Centre
James Cook University, School of Medicine
Mt Isa Centre for Rural and Remote Health
North and West Queensland Primary Health Care
Queensland Divisions of General Practice
Queensland Health
Queensland Rural Medical Support Agency
Rural and Regional Queensland Consortium
Townsville Division of General Practice
Tropical Medical Training