



**QRMSA Minimum Data Set Report as at 30<sup>th</sup> November 2003**

**Compiled by**

**Queensland Rural Medical Support Agency**

## **Queensland Rural Medical Support Agency 2003**

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## QRMSA Minimum Data Set Report – 30<sup>th</sup> November 2003

### 1. Introduction

As a part of their contractual agreement with the Commonwealth Department of Health and Ageing (CDoHA), Rural Workforce Agencies (RWA's) in all states and territory have undertaken to collect and report a minimum, specified set of data in relation to the rural and remote General Practice workforce in locations classified RRMA 4 through RRMA 7.

Undertaken individually by each RWA, deidentified data is compiled nationally through the Australian Rural and Remote Workforce Agencies Group (ARRWAG) to provide a comprehensive portrayal of the Australian rural and remote medical workforce.

The data were first compiled at a national level in December 2001 and are updated on a six monthly basis as at 31<sup>st</sup> May and 30<sup>th</sup> November each year. Data in relation to the number of medical practitioners, country of basic medical qualification, residency status, age, gender and length of stay in current location are largely derived from databases maintained by each RWA. Data in relation in procedural services provided, hours of work and types of practice are largely self-reported and may be incomplete due to non-responses and/or missing data.

Each RWA normally surveys rural and remote medical practitioners in their state/territory in the latter part of each year. Core questions for the Minimum Data Set have been developed and standardised among the states/territories. In addition, states/territory have the flexibility to incorporate additional questions should they wish. While the annual MDS survey is a major component of the data reported, all RWA's utilise additional resources to verify and validate their data. It should also be noted that the number of doctors reported reflect the more stable elements of the rural and remote medical workforce and do not normally include transient, short term service providers (e.g., locum tenens/Queensland Health Relievers).

Data provided in this report is for Queensland only and was current as at 30<sup>th</sup> November 2003.

### 2. Number and type of Medical Practitioner by RRMA

Data indicated that as at 30<sup>th</sup> November 2003, the number of medical practitioners currently in RRMA 4 to 7 locations was 931. This represents an increase of 38 practitioners compared with numbers reported as at 30<sup>th</sup> November 2002. An explanation of these changes will be discussed in the summary section of this report. Table 1 presents the total number of medical practitioners working in RRMA 4 to 7 locations in Queensland by practitioner type as at 30<sup>th</sup> November 2003. Table 2 provides a breakdown of this distribution by gender and RRMA. A more detailed analysis of gender distribution by selected age categories is provided in Figure 2. Table 3 provides a breakdown of employment type by Division of General Practice.

**Table 1: Employment type by RRMA**

Employment Type	RRMA4	RRMA5	RRMA6	RRMA7	Total
ACCHS	0	5	5	1	11
General Practitioner	269	322	48	22	661
GP/Academic	0	0	2	0	2
GP/Company	0	4	0	0	4
MORPP	0	8	2	5	15
MS	4	13	4	8	29
MSRPP	0	24	5	24	53
RFDS	0	0	4	9	13
RMO	55	15	21	1	92
SMO	16	20	8	7	51
Total	344	411	99	77	931

**Legend**

ACCHS	Aboriginal Community Controlled Health Service
MORPP	Medical Officer with Right of Private Practice
MSRPP	Medical Superintendent with Right of Private Practice
MS	Medical Superintendent
RMO	Resident Medical Officer (includes JHO, SHO, PHO etc.)
SMO	Senior Medical Officer
General Practitioner	General Practitioner
GP/Academic	GP where main responsibilities are teaching/administration
GP/Company	GP where main employment is with Defence Forces or company

**Table 2: Gender by RRMA**

RRMA	Male	Female	Total
4	237	107	344
5	284	127	411
6	67	32	99
7	58	19	77
Total	646	285	931

**Table 3: Employment type by Division**

Division	ACCHS	GP	GP/Acad	GP/Comp	MORPP	MS	MSRPP	RFDS	RMO	SMO	Total
CairnsDGP	0	1	0	0	0	0	2	0	0	0	3
CapDGP	0	53	0	0	0	2	0	0	7	4	66
CQR	0	28	0	0	2	1	12	0	1	2	46
FNQ	7	60	0	0	0	9	1	9	6	17	109
GCDGP	0	9	0	0	0	0	0	0	0	0	9
IWMDGP	0	27	0	0	3	0	3	0	1	0	34
MacDGP	0	26	0	0	0	1	0	0	2	2	31
NWQPHC	2	47	2	0	3	5	11	4	19	4	97
RedDGP	0	4	0	0	0	0	0	0	0	0	4
SQR	2	100	0	0	6	7	18	0	7	12	152
SunCDGP	0	194	0	0	0	2	1	0	12	3	212
TDGP	0	8	0	0	0	0	0	0	0	0	8
ToowDGP	0	25	0	4	0	1	0	0	0	0	30
WBDGP	0	79	0	0	1	1	5	0	37	7	130
Total	11	661	2	4	15	29	53	13	92	51	931

### 3. Workloads

Estimates of Full Time Equivalents (FTE's) and Full Time Workload Equivalents (FWE's) as used by the Health Insurance Commission (HIC) in calculating GP medical service provision are based solely on the number and the dollar value of claims made by a provider over a given reference period (usually 12 months). While these can be useful measures of overall service provision under Medicare, they do not reflect the number of hours worked in providing medical services, or services provided that are not claimed and/or are not claimable through the HIC. For example, a medical practitioner is classified as full-time by the HIC if the Schedule fee value of services processed over a 12 month period is \$82,414 or more for that practitioner. A practitioner is classified as part-time by the HIC if billings are between \$20,275 and \$82,413. Billings under \$20,274 designate the provider as casual. Similarly, a Full Time Workload Equivalent (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.

An alternative measure of service provision is number of hours worked. The Australian Bureau of Statistics (ABS) defines full-time work as being 35 hours per week or more and part-time work as less than 35 hours. It is this measure that has been chosen by QRMSA to differentiate between full-time and part-time service provision.

An estimate of full-time/part-time medical service provision utilising ABS benchmark was undertaken based on self reported clinical hours worked. Data was available for 62.2% of the total number of GPs. Data as displayed in Table 4 indicates that 73.4% of respondents worked 35 hours a week or more in the provision of routine clinical GP services.

**Table 4: Self-reported clinical hours**

Hours	Frequency	Percent
< 20 hours	39	6.74
20 to 35 hours	115	19.86
35 hours plus	425	73.40
Total	579	100.00

It should be noted that hours reported are for those worked in GP practice only and should not be interpreted as total hours as hospital hours, travel, teaching, supervision time etc. are not included. The average number of clinical hours reported was 40.84 hours per week (N=579).

A further breakdown of self-reported clinical hours by gender is displayed in Table 5 below.

**Table 5: Self-reported clinical hours by gender**

Clinical hours		Male	Female
< 20 hours	Count	18	21
	% within Gender	4.63%	11.05%
20 to 35 hours	Count	52	63
	% within Gender	13.37%	33.16%
35 hours plus	Count	319	106
	% within Gender	82.01%	55.79%
Total	Count	389	190
	% within Gender	100%	100%

These data appear to be in line with national trends that suggest that female practitioners tend to work less hours compared with their male counterparts (AMWAC, 2000; CDHAC, 2001). Explanations for these differences have been well documented and reported in a considerable number of studies and will not be explored further in this analysis.

Self-reported total hours were also explored. In addition to clinical hours, these hours may include hospital hours, time spent in travel between practices, population health, teaching, administrative or representative work. Data was available for 70.46% of practitioners. Table 6 displays self-reported total weekly hours while Table 7 displays total hours by gender. The average reported total hours were 48.87 hours per week (N=656).

**Table 6: Self-reported Total hours**

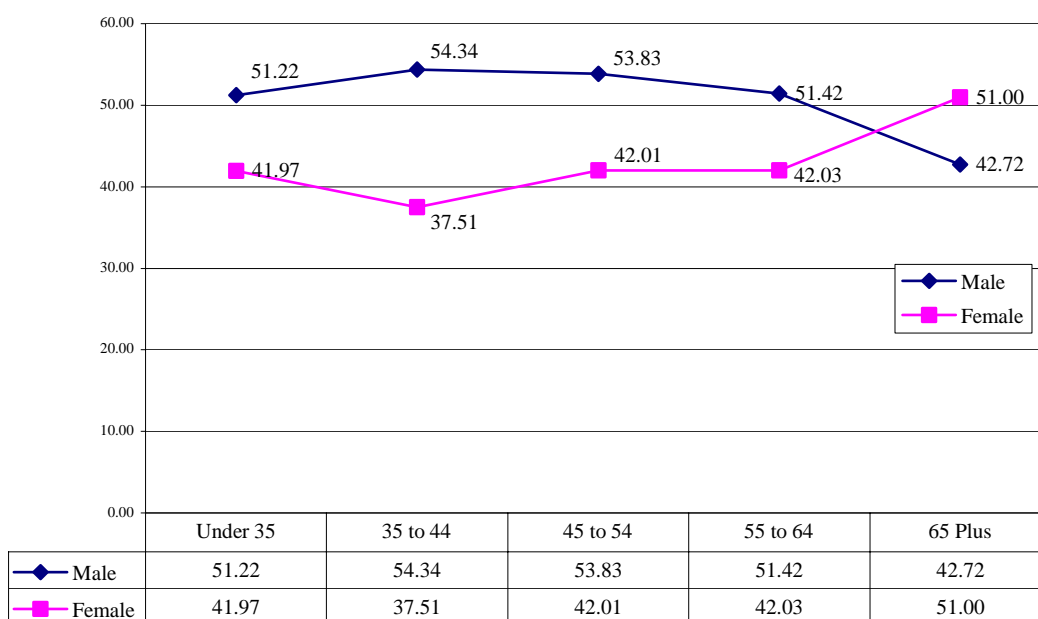
Total hours	Frequency	Valid Percent
< 20 hours	18	2.74%
20 to 35 hours	70	10.67%
35 hours plus	568	86.59%
Total	656	100.00%

**Table 7: Self-reported total hours by gender**

Total Hours		Male	Female	Total
< 20 hours	Count	3	15	18
	% within gender	0.67%	7.25%	2.74%
20 to 35 hours	Count	25	45	70
	% within gender	5.57%	21.74%	10.67%
35 hours plus	Count	421	147	568
	% within gender	93.76%	71.01%	86.59%
Total	Count	449	207	656
	% within gender	100.00%	100.00%	100.00%

A more refined breakdown of average total hours by gender and age categories is presented in Figure 1.

Figure 1: Average total hours worked per week by gender and age category (N=652)



#### 4. Length of stay in current principal practice

In Queensland, the average length of stay in current principal practice was 5.83 years. A more refined breakdown by duration and RRMA is provided in Table 8.

Table 8: Length of stay in current practice by RRMA

RRMA	Duration							Total
	< 6 mths	6-12 mths	1-3 yrs	3 to 5 yrs	5-10 yrs	10-20 yrs	20 yrs plus	
4	53	74	78	39	31	30	28	333
5	66	58	96	40	58	48	38	404
6	16	21	24	11	8	9	9	98
7	8	13	24	11	7	6	7	76
	143	166	222	101	104	93	82	911

Data indicates that 66.1 % of respondents have practiced in their current rural and remote locations for more than a year. Approximately 33.9% are relatively new to their current practice and have been at their current practice for less than 12 months. While these data provide a guide, they do not take into account movements between practices and RRMA.

#### 5. Age and gender by RRMA

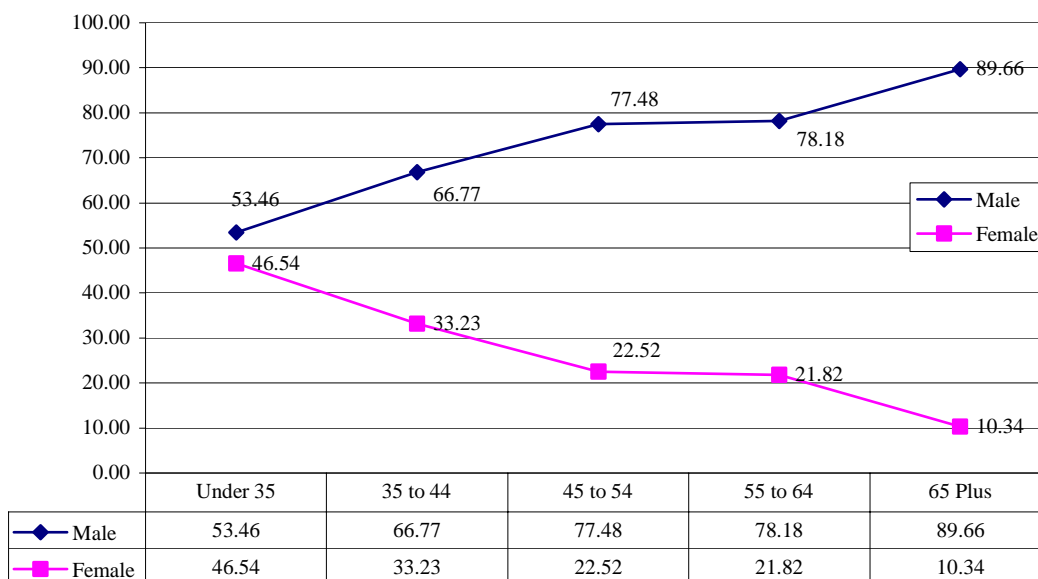
For Queensland the average age for male practitioners was 46.15 years and 41.68 for females. Table 9 displays gender by age category by RRMA.

**Table 9: GP age categories by gender and RRMA (N=879)**

RRMA			Under 35	35-44	44-55	55 Plus	Total
4	Gender	Male	30	79	72	40	221
		Female	26	40	20	11	97
	Total		56	119	92	51	318
5	Gender	Male	33	92	98	53	276
		Female	27	52	34	10	123
	Total		60	144	132	63	399
6	Gender	Male	14	19	18	11	62
		Female	10	10	3	4	27
	Total		24	29	21	15	89
7	Gender	Male	8	23	15	8	54
		Female	11	4	2	2	19
	Total		19	27	17	10	73

Figure 2 below displays the distribution of GPs by gender across a selected number of age categories. These data suggest that females are more broadly represented in the under 45 age categories.

**Figure 2: Proportion of male and female practitioners across age categories (N=879)**



## 6. Known number of procedural practitioners

Data in relation to the provision of procedural services in rural and remote Queensland may be incomplete due to non-respondents, although the number of proceduralist GPs in rural and remote Queensland is fairly well known. Senior Medical Officers employed by Queensland Health and providing procedural services in Maryborough, Hervey Bay and Mount Isa are not included in the data shown below. The known number of practitioners providing specified procedural services as at 30<sup>th</sup> November 2003 is detailed in Table 10.

**Table 10: Number of practitioners undertaking procedural work by type and RRMA**

Procedure	RRMA4	RRMA5	RRMA6	RRMA7	Total
Obstetrics - Normal Delivery	24	51	19	24	118
Anaesthetics - General	23	34	10	10	77
Surgery - Operative	22	33	8	6	69

## 7. Emergency Care and Aboriginal Health provision

Practitioners were also asked if they provided regular Emergency care or Aboriginal Health care services. The number of respondents indicating that they provide these services by RRMA is detailed in Table 11 below.

**Table 11: Number of practitioners providing regular Emergency Care or Aboriginal Health services**

Services	RRMA4	RRMA5	RRMA6	RRMA7	Total
Aboriginal Health	56	133	49	47	285
Emergency Care	123	234	59	57	473

## 8. Types of practice

The number of medical practitioners working in a selection of practice types by RRMA was also explored. Table 12 displays the number of doctors working in each practice type by RRMA for the period ending 30<sup>th</sup> November 2003. MSRPP's and MORPP's are normally assigned to their private practice rather than to the hospital.

**Table 12: Practice type by RRMA**

Number of Practices	Number of Practitioners				Total
	RRMA4	RRMA5	RRMA6	RRMA7	
ACCCHS (5)	0	5	5	1	11
Hospital (42)	76	47	31	16	170
Group (186)	251	297	46	38	632
Solo (118)	17	62	17	22	118
	344	411	99	77	931

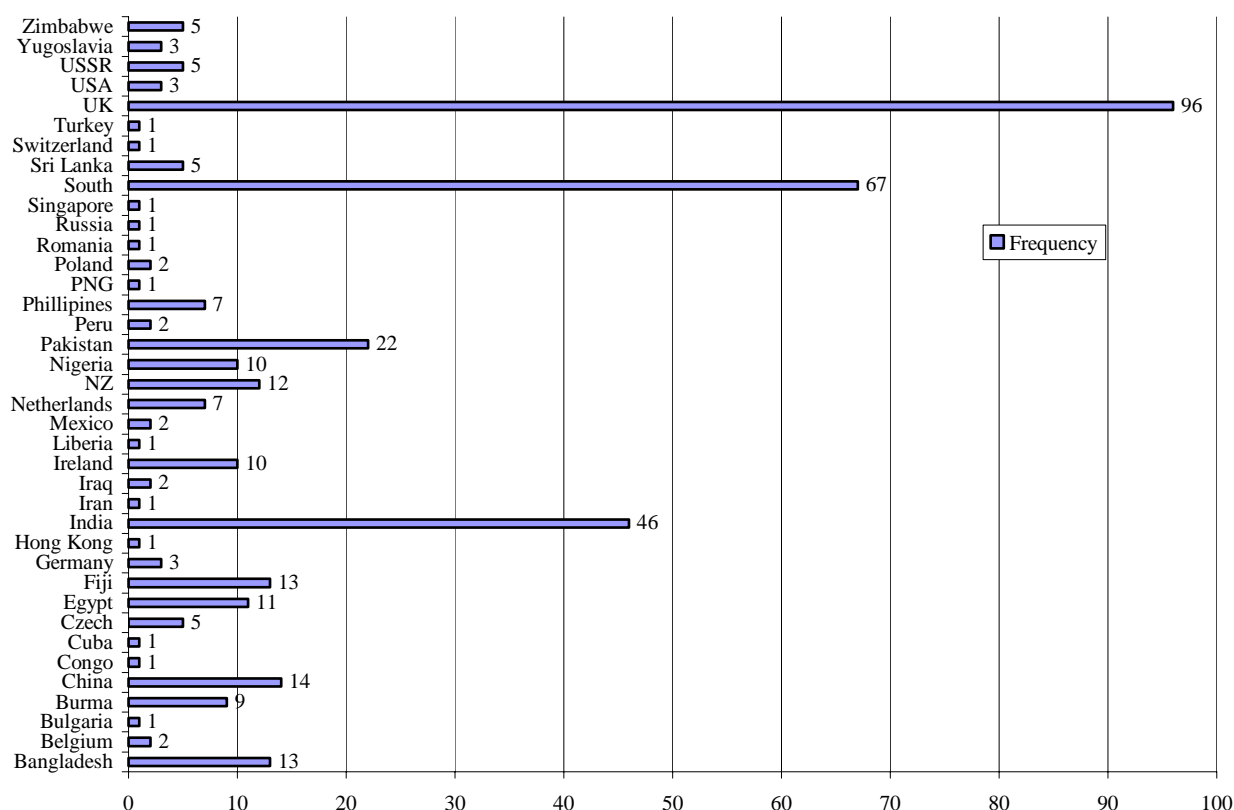
## 9. Country of basic medical qualification

Data indicates that 58.3 per cent (N543) of the current rural and remote medical workforce in Queensland are Australian trained. The other 41.7% per cent (N388) have obtained their basic medical qualification overseas. The largest proportions of Overseas Trained Doctors (OTDs) are from the United Kingdom (10.3%), followed by South Africa (7.2%) and India (4.9%). It also needs to be acknowledged that many Overseas Trained Doctors are Australian citizens or Permanent Residents and have practiced medicine in this country for many years. Temporary Resident Doctors (TRDs) comprise 19.01% (N177) of the current Queensland rural and remote medical workforce. Table 13 provides a breakdown by citizenship status and number of Australian/Overseas Trained Doctors. Figure 3 provides a breakdown of country of basic medical qualification for overseas trained doctors.

**Table 13: Citizenship status and number of Australian/Overseas Trained Doctors**

RRMA	Citizenship Status			Total	% Temporary
	Australian	Permanent	Temporary		
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
				Number	Percent
Australian Trained Doctors				543	58.3
Overseas Trained Doctors				388	41.7
				Number	Percent
Overseas trained and Australian citizens or permanent residents				211	54.38
Overseas trained and temporary residents				177	45.62

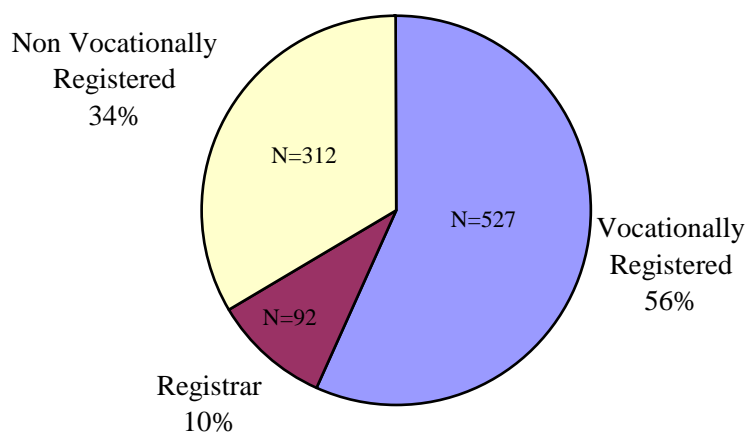
**Figure 3: Country of basic medical qualification (non-Australian trained doctors N=388)**



## 10. Vocational Status

Current data indicates that 56% per cent of medical practitioners in rural and remote Queensland are vocationally registered. Vocational Registrars undertaking training comprise a further 10%. Approximately (34%) of the rural and remote medical workforce in RRMA 4 to 7 locations do not have vocational registration. Figure 4 displays known vocational status.

**Figure 4: Vocational Status**



## 11. State/Territory variations

Queensland data includes 172 state salaried doctors (Residential Medical Officers, Senior Medical Officers and Medical Superintendents) who do not have the right of private practice. However, due to the differing nature of medical service provision in Queensland, it is estimated that 60 to 70 percent of these doctors provide primary care/GP type services in their communities. In the absence of a reliable method of differentiating their degree of primary care provision, they have been included in the current dataset. The negative aspect of this inclusion is that it probably does provide an overestimate of primary care/GP type services currently available in rural and remote Queensland. The data do not include Senior Medical Officer employed by Queensland Health in Maryborough, Hervey Bay or Mount Isa. Due to the size and nature of these hospitals, it is considered that these SMO's are providing specialist type services. Additionally, RFDS Medical Officers working from the Cairns base have been reclassified as RRMA 7 due to the communities they service.

## 12. Summary

The data provided in this report has been based on elements requested by the General Practice Branch of the Commonwealth Department of Health and Ageing. While the data may differ to that produced by the HIC, we believe that it is probably more valid and current as numbers reported reflect 'on ground' realities and are based on local knowledge of medical provision in communities. Measures such as FTE and FWE are based on the number and value of claims processed by the HIC and often do not capture the full extent of medical service provision in rural and remote communities. The QRMSA is satisfied that the collated data provides an accurate portrayal of medical service provision in their areas as at the 30<sup>th</sup> November reporting date.

Changes in practitioner numbers since 30<sup>th</sup> November 2002 reporting period have been reflected almost exclusively in RRMA 4 locations. There has been an increase of 35 practitioners in these locations since 30<sup>th</sup> November. The number of practitioners in RRMA 5, 6 and 7 locations has remained essentially unchanged.

Trends evident in this report include:

- A 4.26% increase in practitioner numbers between 30<sup>th</sup> November 2002 and 30<sup>th</sup> November 2003 (N38).
- No increase in numbers between 31<sup>st</sup> May 2003 and 30<sup>th</sup> November 2003.
- A relatively high number of rural and remote practitioners (N118) working in sole practice situations.
- A continuation of national trends with increasing number of female practitioners in lower age groups.
- A continuation of trends that suggest that female practitioners tend to work less hours compared with their male counterparts.
- Enumeration of known procedural practitioners.

### 13. Additional data from Hicstats

In an attempt to further explore the National and Queensland medical workforces, the Queensland Rural Medical Support Agency has recently purchased data from Hicstats. As mentioned previously in this report, HIC data do have some limitations and are based primarily on the \$ dollar value of medical services billed through the HIC. It is also difficult to obtain reliable information for small areas due to confidentiality rules applied by the HIC. The data purchased by QRMSA was based on Full-time Workload Equivalent by gender, age category and state/national. While data was also requested by RRMA or Remote Area classification, this could not be provided. However, similar data can be accessed by Division of General Practice and may be explored at a later date. The data as presented in Appendix 1 are quite interesting and to some extent may suggest a potential under utilisation of existing medical workforce capacity as opposed to an undersupply. The data presented are based on the reference period April 2002 to March 2003.

### 14. Terminology

ABS	Australian Bureau of Statistics
ACCHS	Aboriginal Community Controlled Health Service
AMWAC	Australian Medical Workforce Advisory Committee
ARRWAG	Australian Rural and Remote Workforce Agencies Group
CDHAC	Commonwealth Department of Health and Aged Care (now Department of Health and Ageing)
CDoHA	Commonwealth Department of Health and Ageing
FTE's	Full-time equivalents (calculated on HIC billings of \$81,097 or more)
FWE's	Full-time workload equivalents (calculated on average HIC billings for full-time doctors - (\$203,857 for 2001-2002 reference period)
HIC	Health Insurance Commission (Medicare)
Hicstats	Health Insurance Commission (Statistics section)
RFDS	Royal Flying Doctor Service
RRMA	Rural Remote and Metropolitan Area Classification
RWA	Rural Workforce Agency

MSRPP  
MORPP

Medical Superintendent with Right of Private Practice  
Medical Officer with Right of Private Practice

## 15. References

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Commonwealth Department of Health and Aged Care. (2001). *Measuring remoteness: accessibility/remoteness index of Australia (ARIA). Occasional Papers: New Series Number 14, October 2001*. Canberra: CDHAC.

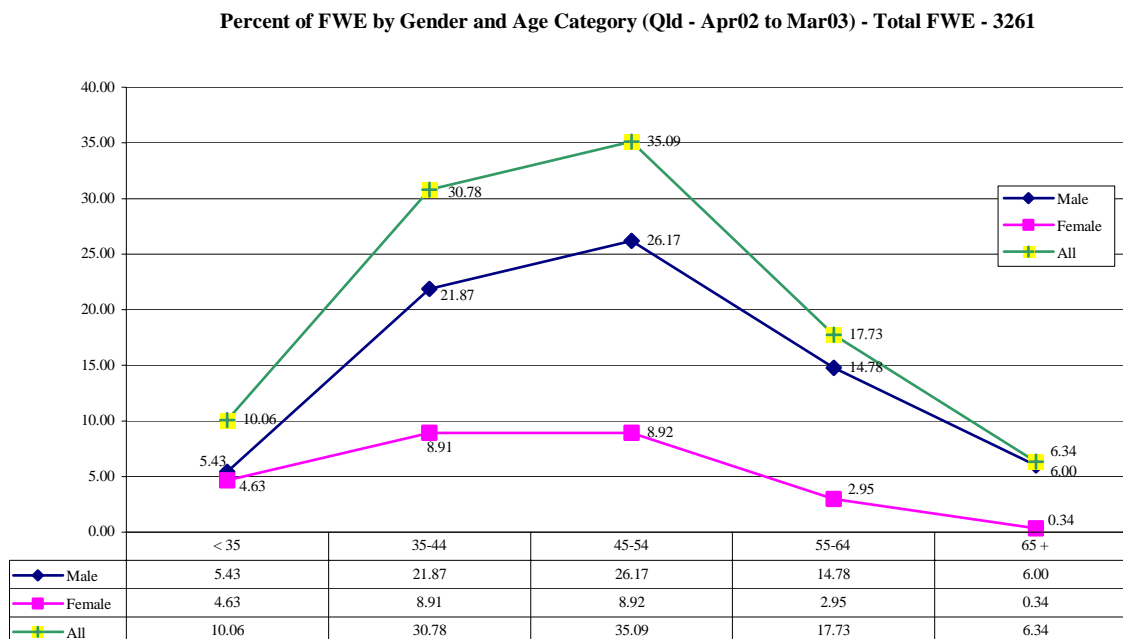
Australian Medical Workforce Advisory Committee. (2000). *The General Practice Workforce in Australia: AMWAC Report 2000.2*. Sydney.

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Australian Bureau of Statistics (2001). *Outcomes of ABS views on remoteness consultation, Australia*. ABS Cat No 1244.0.00.001. Canberra, ABS.

## Appendix 1

**Figure 5**



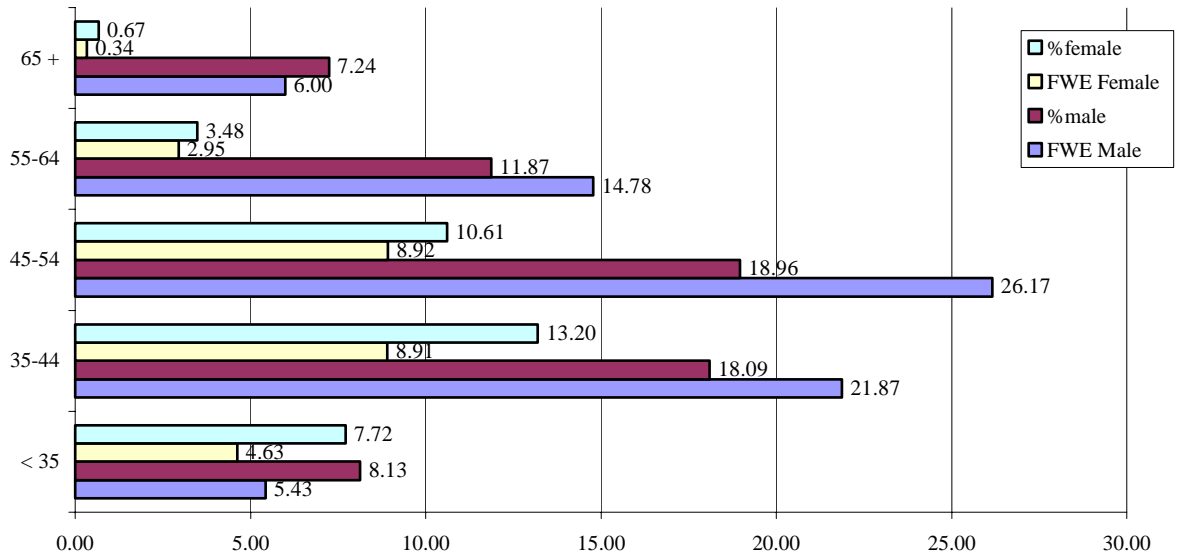
The data displayed above shows the percentage of Full-time Workload Equivalent (FWE) for Queensland by gender and age category. As indicated previously, the (FWE) value is calculated for each doctor by dividing the doctor's Medicare billing (Schedule fee value of claims processed by the HIC during the 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.

Data available for the April 2002 to Mar 2003 reference period for Queensland shows a total FWE value of 3261 has been provided by 4598 practitioners. This headcount of practitioners is based on the practitioners providing at least one billable service through HIC over the reference period.

Data as displayed above suggests that based on HIC billings, the majority of the medical workload is being carried by males in the 45 to 54 and 35 to 44 age categories.

**Figure 6**

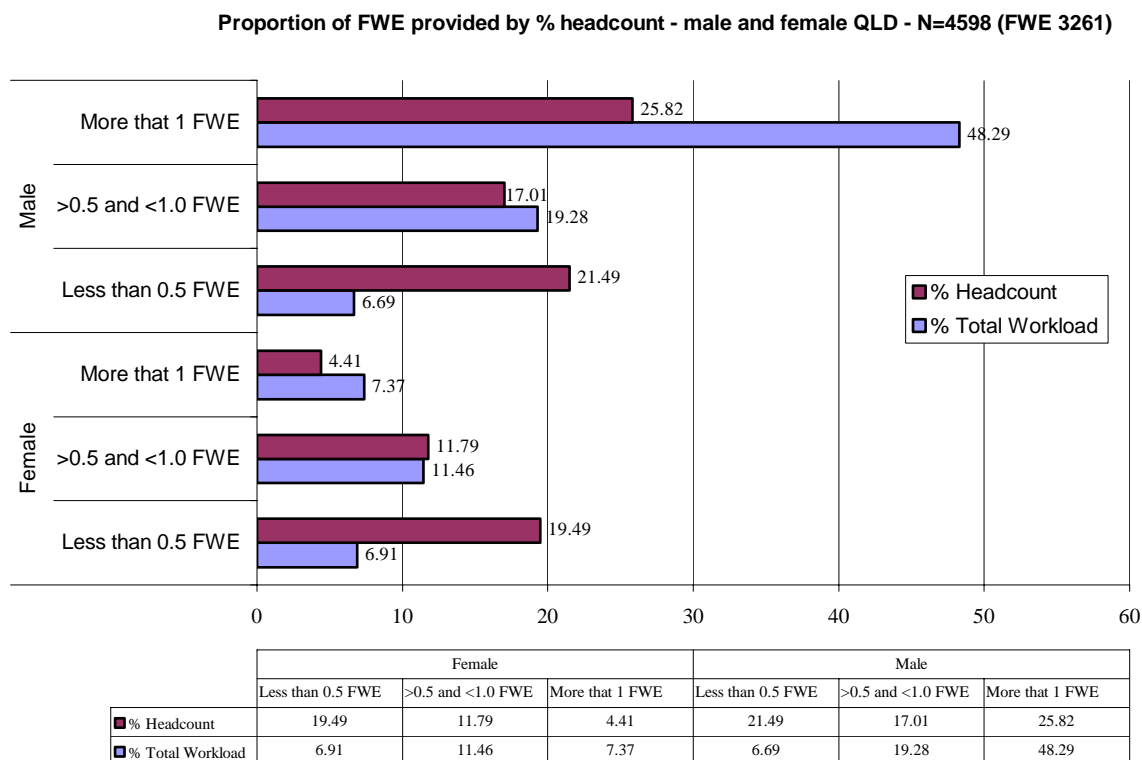
**Percentage of total FWE by headcount %, age category and gender - Qld - Apr02 to Mar03 - FWE 3261; Headcount 4598**



	< 35	35-44	45-54	55-64	65 +
%female	7.72	13.20	10.61	3.48	0.67
FWE Female	4.63	8.91	8.92	2.95	0.34
%male	8.13	18.09	18.96	11.87	7.24
FWE Male	5.43	21.87	26.17	14.78	6.00

The data above provides the same information as shown in Figure 5 with the addition of headcount percentages for each age category. Data indicates that in the under 35 age category, males comprise 8.13% of the headcount and provide 5.43% of the FWE. In contrast in the 45 to 54 age category, males comprise 18.96% of the headcount and provide 26.17 of the FWE.

**Figure 7**



Again the same data is used to provide a differing perspective. Data as shown above indicates that approximately 41% of the potential workforce is providing less than 0.5 FWE accounting for approximately 13.6% of FWE. For males, 21.49% of practitioners are providing 6.69% of FWE while for females, 19.49% of practitioners are providing 6.91% of FWE. The majority of FWE workload is being provided by 26% of males who are providing 48.3% of FWE workload.

HIC data can provide a useful and alternate way of examining medical workforce data. It does have limitations in that approximately 9 to 10 percent of private practice work is not captured through HIC billings. Similarly, in the main HIC data does not capture GP type services provided through hospitals. The other major limitations are that is that the data are based solely on the dollar value of claims processed through the HIC, are normally time delayed, not readily available and subject to subsequent readjustments over time.

The data on the following page presents the basic underlying data that was computed from raw data purchased from the HIC.

**Table 14: Underlying HIC data**

Female - Qld	Age Category					Grand Total	HD3	% Total Workload	% Headcount
	FWE RANGE	00-34	35-44	45-54	55-64				
0.0 - < 0.1	6.2	7.9	3.7	2.1	0.3	20.2	311		
0.1 - < 0.2	8.8	14.4	6.4	3.3	0.6	33.5	152		
0.2 - < 0.3	11.4	19.8	16.2	4.6	0.5	52.5	169		
0.3 - < 0.4	11.8	20.6	14.7	4.2	1.1	52.4	119		
0.4 - < 0.5	13.2	25.6	19.7	6.9	1.3	66.7	145		
<b>Less than 0.5</b>	<b>51.4</b>	<b>88.3</b>	<b>60.7</b>	<b>21.1</b>	<b>3.8</b>	<b>225.3</b>	<b>896</b>	<b>6.91</b>	<b>19.49</b>
0.5 - < 0.6	14.1	32.7	22	7.2		76	136		
0.6 - < 0.7	11.7	21.7	32.4	9.7	1.3	76.8	121		
0.7 - < 0.8	10.6	32	26.4	6.6	2.2	77.8	106		
0.8 - < 0.9	11	25.4	23.2	11		70.6	93		
0.9 - < 1.0	11.2	19.7	37	4.7		72.6	86		
<b>Less than 1.0</b>	<b>58.6</b>	<b>131.5</b>	<b>141</b>	<b>39.2</b>	<b>3.5</b>	<b>373.8</b>	<b>542</b>	<b>11.46</b>	<b>11.79</b>
1.0 - < 1.1	9.4	14.8	18.9	9.5	2.1	54.7	58		
1.1 - < 1.2	8	13.6	21.8	2.2		45.6	45		
1.2 - < 1.3	2.5	12.5	11.1	8.6		34.7	29		
1.3 - < 1.4	8	4	5.4	4		21.4	16		
1.4 - < 1.5		10.2	2.9	2.9		16	13		
1.5 OR MORE	13	15.5	29	8.8	1.6	67.9	42		
<b>More than 1.0</b>	<b>40.9</b>	<b>70.6</b>	<b>89.1</b>	<b>36</b>	<b>3.7</b>	<b>240.3</b>	<b>203</b>	<b>7.37</b>	<b>4.41</b>
Grand Total	150.9	290.4	290.8	96.3	11	839.4	1641		
% Total w/l	4.63	8.91	8.92	2.95	0.34	25.74			

Male - Qld	Age Category					Grand Total	HD3	% Total Workload	% Headcount
	FWE RANGE	00-34	35-44	45-54	55-64				
0.0 - < 0.1	7.2	7.4	6.3	5.3	3.3	29.5	496		
0.1 - < 0.2	6.9	12.8	8.6	7.2	6.3	41.8	176		
0.2 - < 0.3	7.8	14.1	9.3	6.9	5.4	43.5	105		
0.3 - < 0.4	5.7	13.2	8.2	9.3	11.6	48	109		
0.4 - < 0.5	8.2	14.8	11.7	11.4	9.4	55.5	102		
<b>Less than 0.5</b>	<b>35.8</b>	<b>62.3</b>	<b>44.1</b>	<b>40.1</b>	<b>36</b>	<b>218.3</b>	<b>988</b>	<b>6.69</b>	<b>21.49</b>
0.5 - < 0.6	8.1	21	17.2	15	8.1	69.4	113		
0.6 - < 0.7	11.7	29	26.8	18.7	14.1	100.3	138		
0.7 - < 0.8	3.8	38.3	37.5	26.5	11.2	117.3	157		
0.8 - < 0.9	16.3	39	47.3	28.5	15.2	146.3	160		
0.9 - < 1.0	17.1	69.4	60.2	34.2	14.5	195.4	214		
<b>Less than 1.0</b>	<b>57</b>	<b>196.7</b>	<b>189</b>	<b>122.9</b>	<b>63.1</b>	<b>628.7</b>	<b>782</b>	<b>19.28</b>	<b>17.01</b>
1.0 - < 1.1	11.4	68.3	86.1	54.4	16.9	237.1	224		
1.1 - < 1.2	9.2	65.8	79	41.1	17.2	212.3	199		
1.2 - < 1.3	6.2	51.1	71.1	33.8	15	177.2	152		
1.3 - < 1.4	8.1	48.6	79.3	36.6	10.8	183.4	142		
1.4 - < 1.5	8.8	37.7	73.9	31.9	10	162.3	120		
1.5 OR MORE	40.7	182.8	231	121.2	26.6	602.3	350		
<b>More than 1.0</b>	<b>84.4</b>	<b>454.3</b>	<b>620.4</b>	<b>319</b>	<b>96.5</b>	<b>1574.6</b>	<b>1187</b>	<b>48.29</b>	<b>25.82</b>
Grand Total	177.2	713.3	853.5	482	195.6	2421.6	2957	100.00	100.00
% Total w/l	5.43	21.87	26.17	14.78	6.00	74.26			

Total FWE 3261

Total HD12 4598

## Appendix 2

### **Rural, Remote and Metropolitan Area Classification (RRMA) and Accessibility/Remoteness Index of Australia (ARIA)<sup>1</sup>**

Many regional programs are targeted at areas of geographic disadvantage and the convenient label of being 'rural' areas often refers to these areas. However, there is not a generally accepted or generally applicable definition for the Australian context that can be used to identify rural areas. As a result, the RRMA classification has been widely used to determine eligibility of an area for program funding. The RRMA classification was used to assign each SLA (based on 1991 boundaries) to one of 7 categories that were further aggregated into three basic zones (Metropolitan, Rural, and Remote).

The seven RRMA categories are:

1. Capital Cities (Metropolitan Zone)
2. Other Metropolitan Centres (Metropolitan Zone)
3. Large Rural Centres (Rural Zone)
4. Small Rural Centres (Rural Zone)
5. Other Rural Areas (Rural Zone)
6. Remote Centres (Remote Zone)
7. Other Remote Areas (Remote Zone)

The use of the word 'rural' in several of the category names of the RRMA classification was not originally intended to be a definition of rurality. However, over time, RRMA category names have evolved into a simple and convenient way of interpreting rurality. Many programs that have to make decisions on eligibility for assistance are constrained by legislation and policy to using RRMA categories that 'define' rural areas. Within the Commonwealth Department of Health and Ageing administration of regional assistance will move from the use of the RRMA classification to use of ARIA over time.

ARIA stands for Accessibility/Remoteness Index of Australia. During 1998, the Commonwealth Department of Health and Aged Care commissioned a project to measure and classify the remoteness of populated localities in relation to 'service centres' of various sizes (based on the 1996 Census). The result was the ARIA index developed by the National Key Centre for Social Applications of Geographical Information Systems (GISCA) at the University of Adelaide. ARIA uses Geographic Information System (GIS) technology to provide a measure of remoteness (from service centres) for all places and points in Australia.

The development of the ARIA index deliberately avoided defining 'rural' areas. In many cases the term 'rural' is used when people are really referring to regional or non-metropolitan Australia. In these situations regional or non-metropolitan areas can be interpreted based on the degree of remoteness of an area (as measured in ARIA by accessibility to service centres). However in other situations a pure remoteness measure may not be the preferred approach. It may be more appropriate to take into account the population size of nearby urban centres and the use of RRMA categories is an accepted way of doing this. Thus it is acknowledged that some program areas rely on RRMA categories to determine eligibility for funding and there is a need to overlay the RRMA categories to current geographic boundaries and use this approach in conjunction with ARIA. To meet the need for programs being able to identify the RRMA-like categories, each of the 1996

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<sup>1</sup> Measuring Remoteness: Accessibility/Remoteness Index of Australia (ARIA). Occasional Papers: New Series Number 14, Commonwealth Department of Health and Aged Care. Further information is available from the department website <http://www.health.gov.au/ari/aria.htm>

SLAs have been allocated a RRMA category code, with categories 6 and 7 being collapsed into a single group for the remote zone.

ARIA defines **five categories** of remoteness based on road distance to service centres, and is available for a variety of geographical units including localities, Census Collection districts (CCDs), Statistical Local Areas (SLAs) and postcodes. The five categories are:

1. **Highly Accessible** (ARIA score 0 - 1.84) - relatively unrestricted accessibility to a wide range of goods and services and opportunities for social interaction
2. **Accessible** (ARIA score >1.84 - 3.51) - some restrictions to accessibility of some goods, services and opportunities for social interaction
3. **Moderately Accessible** (ARIA score >3.51 - 5.80) - significantly restricted accessibility of goods, services and opportunities for social interaction
4. **Remote** (ARIA score >5.80 - 9.08) - very restricted accessibility of goods, services and opportunities for social interaction
5. **Very Remote** (ARIA score >9.08 - 12) - very little accessibility of goods, services and opportunities for social interaction

Until recently, rurality has been described almost exclusively by the seven level Rural, Remote and Metropolitan Areas (RRMA) classification. This classification is based on the size of the local population centre as well as a measure of remoteness.<sup>2</sup>

Work by the National Key Centre for the Social Applications of Geographical Information Systems (GISCA) from 1996 saw the development of improved measures of remoteness: the Accessibility/Remoteness Index of Australia (ARIA), a continuous variable with a remoteness score of 0-12; and its successor, ARIA+ (similar to ARIA, but with a remoteness score of 0-15).

From ARIA, the department of Health and Ageing developed its five-level classification (also called ARIA), and from ARIA+, the Australian Bureau of Statistics developed its six-level classification, the Australian Standard Geographic Classification (ASGC) Remoteness Structure.<sup>3</sup>

### Remoteness classifications

Broad Category	RRMA			DoHA ARIA			ASGC Remoteness		
	Fine Category	Population (000,000)	%	Category	Population (000,000)	%	Category	Population (000,000)	%
Metropolitan	Captital Cities	11.6	64	Highly Accessible	14.9	81	Major Cities	12.1	66
	Other Metropoliotan centres	1.4	8						
Rural	Large Rural centres	1.1	6	Accessible	2.2	12	Inner Regional	3.8	21
	Small Rural centres	1.2	7						
	Other Rural centres	2.4	13	Moderately Accessible	0.8	4	Outer Regional	2.0	11
Remote	Remote centres	0.2	1	Remote	0.2	1	Remote	0.3	0.3
	Other Remote areas	0.3	2	Very Remote	0.2	1	Very Remote	0.2	0.2
							Migatory	<0.1	

Note: This table is a rough guide only; the various classes in each classification are not equivalent.  
Sources: AIHW Population Estimates; AIHW Australia's Health 2002.

<sup>2</sup> Australian Institute of Health and Welfare (2002). Australia's health 2002. Canberra: AIHW.

<sup>3</sup> Australian Bureau of Statistics (2001). Outcomes of ABS views on remoteness consultation, Australia. ABS Cat No 1244.0.00.001. Canberra, ABS.