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Report 2010



Medical Practice in Rural & Remote Australia: National Minimum Data Set (MDS) Report as at 30th November 2010



Health Workforce Queensland and New South Wales Rural Doctors Network 2010

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Rural Workforce Agencies National Minimum Data Set Report – 30 November 2010

1. Introduction

During the 2001-2004 triennium, as a part of their contractual agreement with the Australian Government Department of Health and Ageing (DoHA), Rural Workforce Agencies (RWAs) in all states and the Northern Territory were required 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 were compiled nationally through the Australian Rural and Remote Workforce Agencies Group (now Rural Health Workforce Australia) to provide a comprehensive portrayal of the Australian rural and remote medical workforce.

The requirement to collect and report a minimum data set and compile these were not included in DoHA's specifications for the 2004-2007 triennium. However, the RWAs in all states and territory appreciated the utility of maintaining a core set of data in relation to the rural and remote medical workforce that was current and based on operational information systems maintained by the RWAs. As such it was decided that the RWAs would continue to collect and compile a national Minimum Data Set for RRMA 4 to 7 locations. From 2007, the collection and compilation of a national Minimum Data Set was again a contractual requirement.

The data were first compiled at a national level in December 2001 and are updated on an annual basis as at 30th November each year. Data in relation to numbers of GPs, age, gender, procedural skills and length of stay in current location are largely derived from databases maintained by each RWA. Data in relation to primary income source, models of service provision, hours of work and types of practice are largely self-reported.

Most RWAs survey rural and remote medical practitioners in their state or territory in the third quarter each year. All RWAs extract workforce data at the agreed date each year. Core questions for the Minimum Data Set have been developed and standardised among the states and territory. In addition, states and 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 RWAs utilise additional methods and resources to update, 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).

Data provided in this report are a compilation of core data provided by Rural Workforce Agencies in all states and territory and was current as at 30th November 2010.

2. Demographics of the rural and remote GP workforce

This section will enumerate the rural and remote medical workforce by state, ASGC-RA, age and gender.

Data indicated that as at 30 November 2010, the number of medical practitioners practicing in ASGC-RA 2 to 5 locations was 6467. Due to changes in rural classification systems, it is not possible to directly compare this number with previous periods. Table 1 presents the total number of medical practitioners working in ASGC-RA 2 to 5 by state or territory as at 30th November 2010.

Table 2 provides a breakdown of this distribution by gender and ASGC-RA while Table 3 displays gender composition by state.

Table 1: Practitioner numbers by State or Territory and ASGC-RA categories

State	Inner Regional	Outer Regional	Remote	Very Remote	Total
NSW	1458	332	23	7	1820
NT	0	58	69	32	159
Qld	874	670	89	33	1666
SA	211	167	50	9	437
TAS	411	134	7	3	555
VIC	929	224	6	0	1159
WA	244	221	131	75	671
Total	4127	1806	375	159	6467

Table 2: Gender by ASGC-RA

ASGC-RA	Unknown	Male	Female	% Female	Total
ASGC-RA 2	15	2655	1457	35.3%	4127
ASGC-RA 3	6	1194	606	33.6%	1806
ASGC-RA 4	0	240	135	36.0%	375
ASGC-RA 5	0	99	60	37.7%	159
Total	21	4188	2258	34.9%	6467

Table 3: Gender by State or Territory

State/Territory	Unknown	Male	Female	% Female	Total
NSW	0	1207	613	33.7%	1820
NT	0	94	65	40.9%	159
Qld	0	1055	611	36.7%	1666
SA	0	296	141	32.3%	437
TAS	0	307	248	44.7%	555
VIC	21	783	355	30.6%	1159
WA	0	446	225	33.5%	671
Total	21	4188	2258	34.9%	6467

Table 3 indicates that the proportion of female practitioners in the Northern Territory and Tasmania are comparatively higher than any other state. Figure 1 displays the percentage of female practitioners by state compared with the national average for rural and remote female practitioners. Figure 2 displays the proportion of male and female practitioners in five-year age categories.

Figure 1: Percentage of female practitioners by state or territory

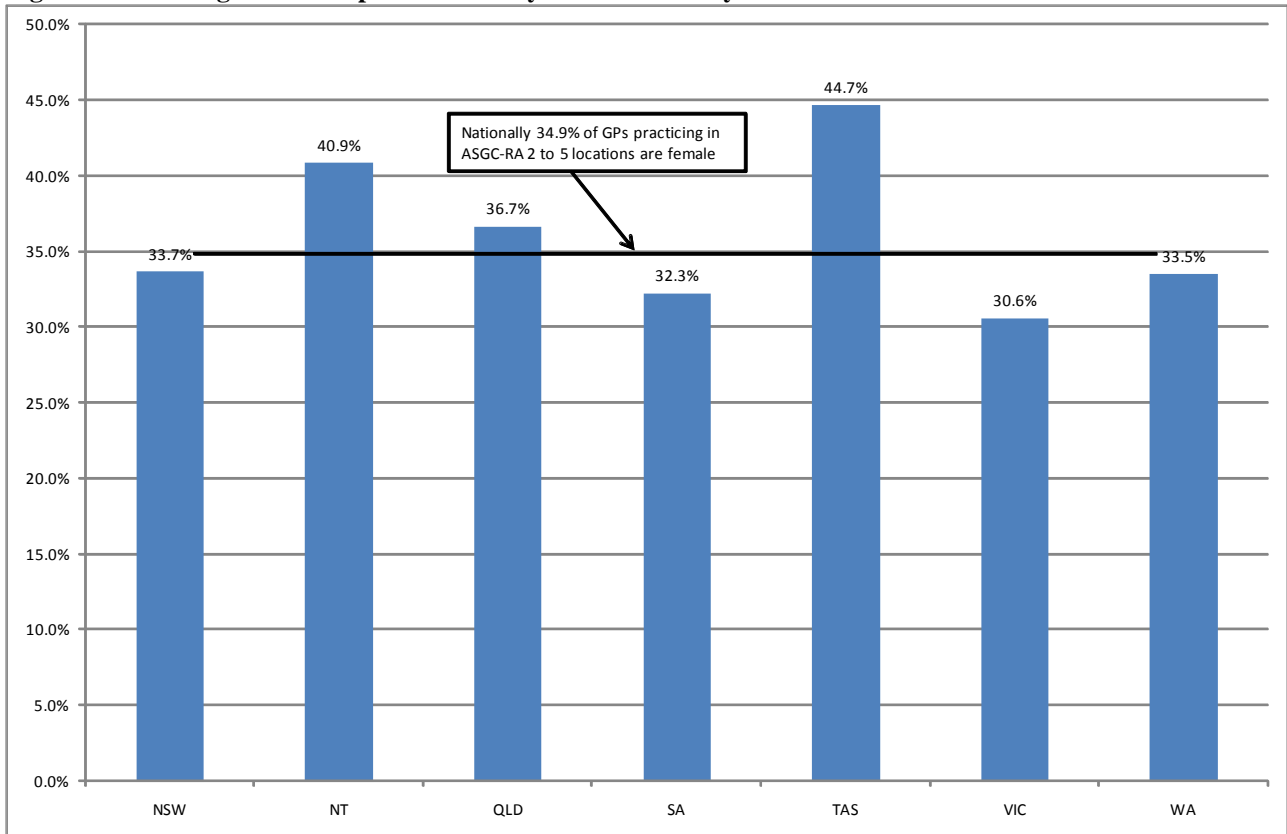
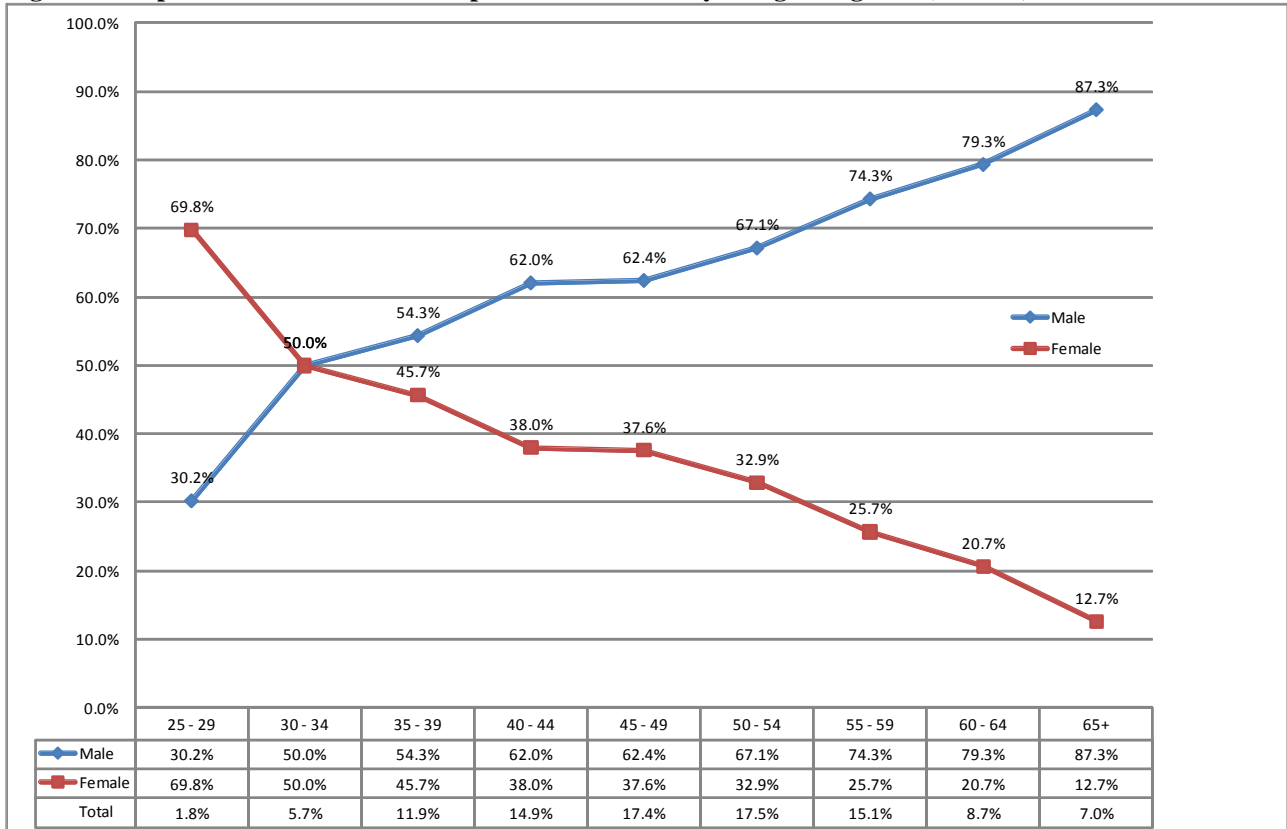


Figure 2: Proportion of male and female practitioners in five-year age categories (N=5420)



Nationally, the average age for male GPs was 51.32 years (N=3575) and 46.50 years for females (N=1846). The overall average age for all practitioners (N=5423) was 49.68 years. Table 5 displays gender distribution by broad age categories by ASGC-RA.

Table 4: Practitioner ages by gender and ASGC-RA - broad age categories (N=5421)

Age Category	Gender	ASGC-RA 2	ASGC-RA 3	ASGC-RA 4	ASGC-RA 5	Total
25-34	Male	96	51	22	14	183
	Female	128	58	25	10	221
	Total	224	109	47	24	404
35-44	Male	492	277	64	18	851
	Female	381	167	38	16	602
	Total	873	444	102	34	1453
45-54	Male	808	325	70	21	1224
	Female	446	163	37	20	666
	Total	1254	488	107	41	1890
55-64	Male	665	242	54	25	986
	Female	212	72	15	10	309
	Total	877	314	69	35	1295
65 plus	Male	224	89	12	6	331
	Female	35	10	2	1	48
	Total	259	99	14	7	379

3. Workloads

Estimates of Full Time Equivalents (FTEs) and Full Time Workload Equivalents (FWEs) as used by Medicare Australia 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 or are not claimable through Medicare Australia. For example, a medical practitioner is classified as full-time by Medicare Australia if the Schedule fee value of services processed over a 12 month period is \$100,024¹ (2008-2009) or more for that practitioner. 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 Medicare Australia during the reference period) by the mean billing of full-time doctors for reference period. For the 2008-2009 reference period, this value was \$278,990².

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 RWAs to differentiate between full-time and part-time service provision.

An estimate of full-time or part-time medical service provision utilising ABS benchmark was undertaken based on self reported GP clinical hours worked. Data was available for 66.9% of the total number of GPs. Data as displayed in Table 5 indicates that 60.7% of these respondents worked 35 hours a week or more in the provision of routine clinical GP services.

¹ MBS Statistics, March 2011

² Ibid

Table 5: Self-reported GP clinical hours

Hours	Frequency	Percent
Less than 20 hours	528	12.2
20 to 35 hours	1173	27.1
35 hours plus	2630	60.7
Total	4331	100.0

It should be noted that hours reported are for those worked in GP practice only and should not be interpreted as total hours since hospital hours, travel, teaching and supervision time for example are not included. The average number of GP clinical hours reported was 35.1 hours per week (N=4331).

A further breakdown of self-reported GP clinical hours by gender is displayed in Table 6 below.

Table 6: Self-reported GP clinical hours by gender

Clinical Hours	Male		Female	
	Number	Percent	Number	Percent
Less than 20 hours	233	8.2%	295	19.8%
20 to 35 hours	622	21.9%	551	37.0%
35 hours plus	1985	69.9%	645	43.3%
Total	2840	100.0%	1491	100.0%

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 were available for 70.3% of practitioners. Table 7 displays self-reported total weekly hours while Table 8 displays total hours by gender. The average reported total hours were 42.33 hours per week (N=4549).

Table 7: Self-reported total hours

Hours	Number	Percent
Less than 20 hours	290	6.4
20 to 35 hours	824	18.1
35 hours plus	3435	75.5
Total	4549	100.0

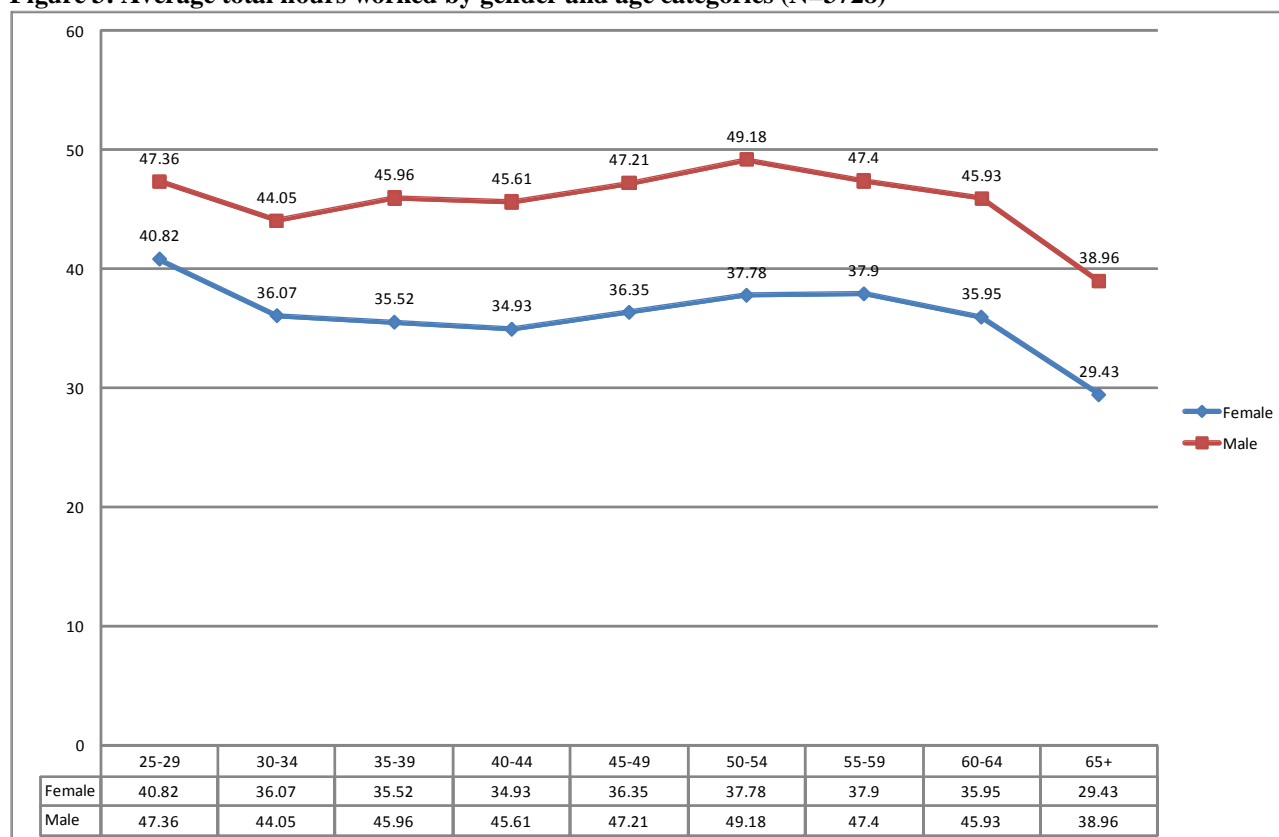
Data indicates that 24.5% of practitioners are currently working part time as defined by the ABS (i.e. less than 35 hours per week).

Table 8: Self-reported total hours by gender

Total Hours	Male		Female	
	Number	Percent	Number	Percent
Less than 20 hours	104	3.5%	186	11.9%
20 to 35 hours	353	11.8%	471	30.1%
35 hours plus	2528	84.7%	907	58.0%
Total	2985	100.0%	1564	100.0%

Data for both self reported GP and self reported total hours, appear to be in line with national trends that suggest that female practitioners tend to work less hours compared with their male counterparts.^{3,4} A more refined breakdown of average total hours by gender and age categories is presented in Figure 3. Additional, detailed data in relation to hours worked is presented in Appendix 1.

Figure 3: Average total hours worked by gender and age categories (N=3728)



³ Australian Medical Workforce Advisory Committee. The General Practice Workforce in Australia: Supply and Requirements to 2013, AMWAC Report 2005.2. Sydney; 2005.

⁴ Department of Health and Aged Care. The Australian Medical Workforce. Occasional Papers New Series No.12, August 2001. Canberra: DHAC; 2001.

4. Length of stay in current principal practice

Nationally, the average length of stay in current principal practice was 8.0 years. A more refined breakdown by duration and ASGC-RA is provided in Table 9.

Table 9: Length of stay in current practice by ASGC-RA

ASGC-RA	Duration								Total
	< 6 mths	6-12 mths	1-2 yrs	2-3 yrs	3-5 yrs	5-10 yrs	10-20 yrs	20 yrs +	
ASGC-RA 2	339	385	462	338	457	643	534	577	3735
ASGC-RA 3	162	183	201	203	284	316	194	195	1738
ASGC-RA 4	42	56	58	48	46	56	47	16	369
ASGC-RA 5	22	26	30	24	19	15	15	5	156
Total	565	650	751	613	806	1030	790	793	5998

Data indicates that while 79.7 % (N=4783) of respondents have practiced in their current rural and remote locations for more than a year, 20.3% (N=1215) are relatively new to their current practice and have been practising in these locations for less than 12 months.

5. Known number of proceduralists

The MDS survey further seeks to enumerate the number of rural and remote non-specialist practitioners providing procedural services in ASGC-RA 2 to 5 locations. However, national data in relation to the provision of procedural services in rural and remote Australia may be incomplete due to non-respondents. The known number and proportions of practitioners providing specified procedural services as at 30 November 2010 is detailed in Tables 10 to 11 (below). In many cases it is possible for a practitioner to perform a number of procedures e.g., Anaesthetics and Obstetrics or Obstetrics and Surgery. The number of known procedural practitioners as detailed in Tables 10 and 11 (N=861) is therefore less than the total number of procedures documented (N=1247). Of the 861 procedural practitioners, 311 (36.1%) perform multiple procedures. A Venn diagram illustrating practitioners undertaking single or multiple procedures is displayed in Figure 4. Gender composition of proceduralists compared to the general rural and remote medical workforce is displayed in Figure 5.

Table 10: Number of practitioners undertaking procedural work by type and state or territory

Procedure	NSW	NT	QLD	SA	TAS	VIC	WA	National*
Anaesthetics General	99	3	97	67	0	82	100	448
Obstetrics Normal delivery	106	4	112	79	0	109	129	539
Surgery Operative	80	2	51	22	0	71	34	260
Known Proceduralists**	200	7	164	118	0	176	196	861
Total Practitioners	1820	159	1666	437	555	1159	671	6467

Table 11: Number of practitioners undertaking procedural work by type and ASGC-RA

Procedure	ASGC-RA 2	ASGC-RA 3	ASGC-RA 4	ASGC-RA 5	National*
Anaesthetics General	195	177	55	21	448
Obstetrics Normal delivery	230	219	76	14	539
Surgery Operative	139	103	14	4	260
Known Proceduralists**	409	324	99	29	861
Total Practitioners	4127	1806	375	159	6467

* GPs practicing in ASGC-RA 2 - 5

** GPs practicing in at least one procedural field

Figure 4: Venn diagram illustrating numbers undertaking single or multiple procedures (N=861)

- 243 Obstetrics Only
- 150 Obstetrics & Anaesthetics
- 208 Anaesthetics Only
- 18 Anaesthetics & Surgery
- 96 Surgery Only
- 74 Surgery & Obstetrics
- 72 Surgery, Obstetrics & Anaesthetics

Total: 861

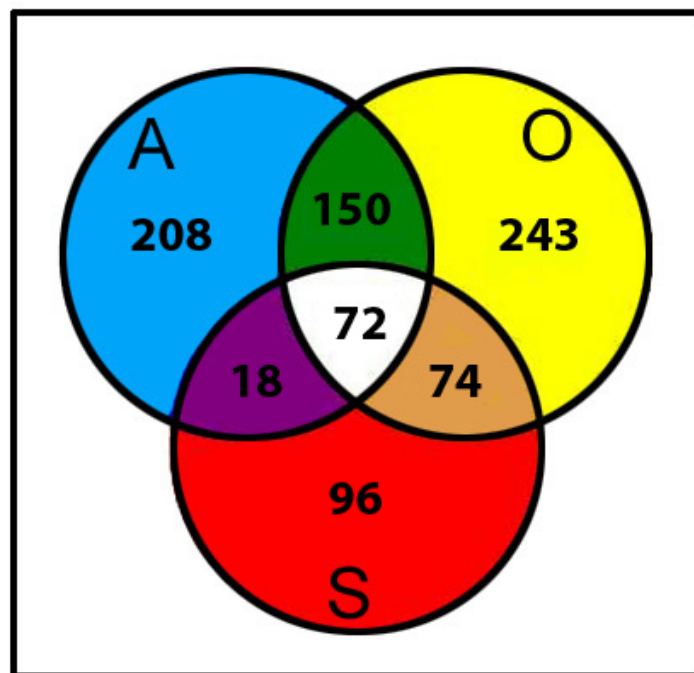
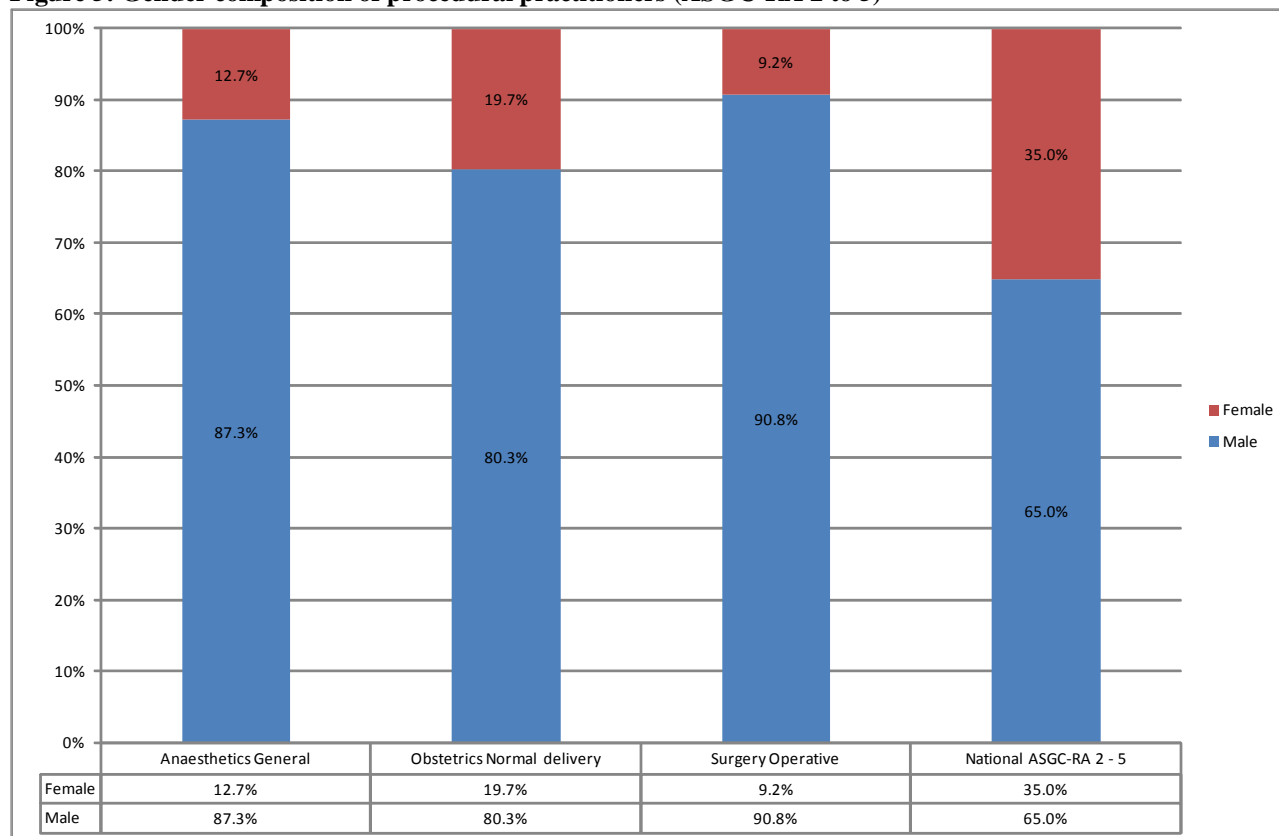


Figure 5: Gender composition of procedural practitioners (ASGC-RA 2 to 5)



6. Emergency care and Aboriginal health

The survey further sought to enumerate the number of rural and remote practitioners who provide regular emergency care or Aboriginal health services. Tables 12 to 15 display these figures by state or territory and ASGC-RA.

Table 12: Number and proportions of practitioners providing emergency care by state or territory

State	Number	Percent
NSW	347	19.1
NT	35	22.0
QLD	705	42.3
SA	219	50.1
VIC	559	48.2
WA	368	54.8
Total	2233	34.5

Table 13: Number and proportions of practitioners providing emergency care services by ASGC-RA

ASGC-RA	Number	Percent
ASGC-RA 2	1163	28.2
ASGC-RA 3	776	43.0
ASGC-RA 4	202	53.9
ASGC-RA 5	92	57.9
Total	2233	34.5

Table 14: Number and proportions of practitioners providing Aboriginal health services by state territory

State	Number	Percent
NSW	224	12.3
NT	65	40.9
QLD	558	33.5
SA	39	8.9
TAS	3	0.5
VIC	241	20.8
WA	296	44.1
Total	1426	22.1

Table 15: Number and proportions of practitioners providing Aboriginal health services by ASGC-RA

ASGC-RA	Number	Percent
ASGC-RA 2	618	15.0
ASGC-RA 3	522	28.9
ASGC-RA 4	192	51.2
ASGC-RA 5	94	59.1
Total	1426	22.1

7. Types of practice

The number of GPs working in each practice type by ASGC-RA was also explored. Table 16 displays the number of doctors working in each practice type by ASGC-RA for the period ending 30th November 2010. Data was missing or inadequately described for 754 practitioners.

Table 16: Practice type by ASGC-RA

ASGC-RA	Solo		Group	
	Number	Percent	Number	Percent
ASGC-RA 2	347	9.6	3280	90.4
ASGC-RA 3	221	13.7	1394	86.3
ASGC-RA 4	58	17.4	276	82.6
ASGC-RA 5	33	24.1	104	75.9
Total	659	11.5	5054	88.5

8. Primary income source

Table 17 below displays self-reported data on primary income source. Data was available for 4567 (70.6%) respondents. Caution should be exercised in interpreting these data as a significant number of practitioners had more than one income source and in some cases the option selected was not always consistent with known data. For example, in Queensland, some Medical Superintendents with Right to Private Practice described their primary income source as 'Fee for service' while others chose the 'State salaried with rights to private practice' option.

Table 17: Self -reported primary income source

Primary Income Source	Number	Percent
Fee for service	3257	50.4
State salaried with rights to private practice	94	1.5
State salaried without right to private practice	210	3.2
Private practice wage/salary	663	10.3
Local government wage/salary	12	0.2
Non government wage/salary	101	1.6
Aboriginal Community Controlled Health Service salary	162	2.5
Other	68	1.1
Not stated/ inadequately described	1900	29.4
Total	6467	100.0

9. Primary model of service provision

Table 18 below displays self-reported data on primary models of service provision. Data was available for 4736 (73.2%) respondents. Again, caution needs to be exercised in the interpretation of these data as many practitioners have several models of service provision and in some instances, the option chosen was not always consistent with known data. For example, the number of Registrars is understated as many described their primary model as 'Resident GP' or 'Hospital Based GP'.

Table 18: Primary model of service provision

Primary model of service provision	Frequency	Percent
Resident GP	3883	60.0
"Fly in Fly Out"	72	1.1
Member of a Primary Health Care Team	131	2.0
Hospital Based GP	174	2.7
Registrar	428	6.6
Other	48	0.7
Not stated/ inadequately described	1731	26.8
Total	6467	100.0

10. Registrars

The number of registrars currently working in ASGC-RA 2 to 5 locations by state was also explored. These data differ somewhat from self-reported data as shown in Table 18. This is largely due to the tendency of some respondents to describe their primary model of service provision differently to known data maintained by RWAs. Data as displayed in Table 19 indicates that nationally, registrars comprise approximately 10.9% of the rural and remote medical workforce.

Table 19: Registrars in rural practice by state or territory – number and percent

State	Number	Percent	Total
NSW	222	12.2	1820
NT	1	0.6	159
QLD	214	12.8	1666
SA	54	12.4	437
TAS	25	4.5	555
VIC	136	11.7	1159
WA	53	7.9	671
Total	705	10.9	6467

11. On-call hours available and worked

Respondents were also asked the number of hours they were available on-call each week at their practice or hospital and the number of on-call hours actually worked. As many practitioners in small communities and solo doctor towns consider that they are on call 24 hours per day, 7 days a week, the number of on-call hours available was allowed a maximum of 168 hours. Due to a number of erratic responses in relation to on-call hours actually worked, the maximum number of hours allowed was restricted to 40 hours. Table 20 displays the responses that satisfied both these conditions and shows the average number of hours reported as being worked and the average number of hours reported as being available for on-call for 2466 respondents.

Table 20: Average hours available on-call and average hours on-call worked

	Number	Minimum	Maximum	Average	Std. Deviation
Hours per week on call worked	1813	1.00	40.00	10.17	9.49
Hours per week available on call	2466	1.00	168.00	54.96	52.84

12. Leave wanted versus leave taken

Respondents were asked to indicate the number of weeks leave desired each year and the number of weeks actually taken. As a significant number indicated 26 to 52 weeks leave desired, it was decided to set a more realistic maximum of 10 weeks for both leave wanted and taken. All other responses have been filtered out. Data for the valid responses indicate that there is an average 1.5 week deficit between annual leave wanted and annual leave taken.

Table 21: Average leave wanted and average leave taken (weeks)

	Number	Minimum	Maximum	Average	Std. Deviation
Annual leave taken	3074	.50	10.00	4.60	2.01
Annual leave wanted	1915	1.00	10.00	6.05	1.86

13. State or Territory variations

Queensland:

Queensland data includes 116 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 over 75 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.

In a change from previous compilations, Queensland Health salaried doctors in towns with a population greater than 12,000 are not enumerated in this report. These changes in conjunction with the introduction of a new classification system (ASGC) have resulted in approximately an additional 500 medical practitioners being classified as rural or remote in Queensland.

Western Australia:

Twenty six metropolitan-based RFDS doctors have been included in RA 5 due to the communities they service. Western Australian data do not include salaried Medical Officers employed by the Western Australian Country Health Service in Bunbury or Mandurah hospitals as it is considered that these doctors are not providing GP type services.

Northern Territory:

As indicated on page 1 of this report, due to changes in the rural classification system, it is not possible to compare the number of eligible GPs with previous periods as it is estimated that the Northern Territory MDS-eligible workforce has doubled. This is due to the fact that Darwin has been reclassified from RRMA 1 to RA 3. The NT response rate of 36% also makes it difficult to interpret this year's data and data relevant to the Darwin GP population is not yet fully captured by the NT information management system.

Figures outlined in Table 14 for the NT reflect doctors working in community controlled health organisations. It is acknowledged that other doctors (e.g. state salaried doctors) provide significant Aboriginal health services, and therefore, the result in Table 14 is an under-representation.

In relation to GP Registrars, there are approximately 50 registrars training in the NT, however, only 1 GP Registrar survey response was received.

14. Summary

The data provided in this report has been based on agreed elements for a national Minimum Data Set for Rural Workforce Agencies. While the data may differ to that produced by the Medicare Australia, we believe that it is probably as valid since 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 dollar value of claims processed by the Medicare Australia and often do not capture the full complexity of medical service provision in rural and remote communities.

While the data do have some limitations particularly in relation to self-reported hours worked, on-call hours and missing data, state and territory Rural Workforce Agencies are satisfied that the collated data provides a relatively accurate portrayal of medical service provision in their areas as at the 30th November 2010 reporting date.

As indicated in the introduction, many aspects of the data contained in this report are not solely dependent on survey response but are derived from known working data maintained by Rural Workforce Agencies in their individual state or territory. Survey responses are largely used to validate and update known data. Response rates for the current data collection period were; NSW 82.9%, NT 35.8%, QLD 50.1%, SA (not applicable for 2010 data set⁵), TAS 100.0%, VIC 82.0%, WA 74.1%.

Trends evident in this report include:

- An increase in practitioners numbers due to change in classification system from RRMA to ASGC-RA.
- A small change in the percentage of female practitioners working in ASGC2 to ASGC5 locations.
- A decrease in the number of rural and remote practitioners working in sole practice situations (11.5% as opposed to 12.1% in 2009).
- 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.
- A reduction in the average number of clinical hours worked per week. Average clinical hours reported in November 2009 were 35.7. For 2010, the average clinical hours reported was 35.1 hours.

A table outlining these trends or changes is provided in Appendix 1.

⁵ South Australia undertakes three years cycles of surveying rural GPs and achieves response rate of 80%. Workforce data is maintained between survey years through administrative means.

16. Terminology

ABS	Australian Bureau of Statistics
ACCHS	Aboriginal Community Controlled Health Service
ASGC	Australian Standard Geographical Classification
DoHA	Department of Health and Ageing
FTEs	Full-time equivalents (calculated on Medicare billings of \$100,024 or more for 2008-2009 reference period)
FWEs	Full-time workload equivalents (calculated on average Medicare billings for full-time doctors - (\$278,990 for 2008-2009 reference period)
RFDS	Royal Flying Doctor Service
RHWA	Rural Health Workforce Australia
RRMA	Rural Remote and Metropolitan Area Classification
RWA	Rural Workforce Agency

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Appendix 1

ASGC-RA 2 to 5 data as at 30th November 2010

	2010
Total practitioners	6467
Percent female	34.9
Percent male	64.8
Average age female	46.50
Average age male	51.32
Average age (all)	49.68
Average GP clinical hours	35.1
Average total hours	42.33
Average length of stay in current practice (years)	8.0
*Proceduralists General Anaesthetics	448
*Proceduralists Obstetrics (Normal delivery)	539
*Proceduralists Operative surgery	260
*Known Proceduralists (practising in at least one procedural field)	861
* Proportion of rural practitioners providing procedural services	13.3
Proportion of practitioners providing emergency care services	34.5
Proportion of practitioners providing Aboriginal health services	22.1
Proportion of GPs working in solo practices	11.5
Proportion of GPs working in group practices	88.5

Historical trend data based on RRMA 4 to 7 locations between 2002 to 2009

	2002	2003	2004	2005	2006	2007	2008	2009
Total practitioners	3903	4074	4186	4317	4345	4482	4682	4753
Percent female	28.4	29.7	29.7	30.0	30.5	32.2	33.0	33.2
Percent male	71.6	70.3	70.3	70.0	69.5	67.8	67.0	66.8
Average age female	42.19	42.6	43.4	43.9	44.3	44.7	45.0	45.8
Average age male	47.72	48.01	48.6	49.0	49.2	49.5	49.7	50.5
Average age (all)	46.65	46.44	47.1	47.5	47.7	48.0	48.2	49.0
Average GP clinical hours	37.67	37.08	36.54	36.2	36.7	36.1	35.9	35.7
Average total hours	46.65	46.65	43.68	44.1	44.4	44.4	43.7	43.2
Average length of stay in current practice (years)	8.29	9.15	8.25	8.1	8.27	8.20	8.17	8.38
*Proceduralists General Anaesthetics	456	435	459	463	445	431	488	438
*Proceduralists Obstetrics (Normal delivery)	706	638	657	661	622	599	623	583
*Proceduralists Operative surgery	287	287	304	283	275	268	282	258
*Known Proceduralists (practising in at least one procedural field)	935	902	933	929	907	896	934	862
* Proportion of rural practitioners providing procedural services	24.0	22.1	22.3	21.5	20.9	20.0	19.9	18.1
Proportion of practitioners providing emergency care services	41.70	46.60	46.85	41.4	49.5	48.5	41.8	44.8
Proportion of practitioners providing Aboriginal health services	20.50	22.8	19.0	21.4	23.6	23.7	23.0	23.6
Proportion of GPs working in solo practices	16.6	15.8	15.7	14.5	14.6	12.7	13.1	12.1
Proportion of GPs working in group practices	83.4	84.2	84.3	85.5	85.4	87.3	86.9	87.9

Appendix 2

Rural, Remote and Metropolitan Area Classification (RRMA) and Accessibility/Remoteness Index of Australia (ARIA)⁶ and ASGC-RA

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.

In May 2009, the Australian Government announced that Rural, Remote and Metropolitan Areas (RRMA) system will be replaced by the Australian Standard Geographical Classification – Remoteness Areas (ASGC-RA) system. The ASGC-RA has been developed by the Australian Bureau of Statistics, uses 2006 Census data, and is widely used by Commonwealth and state agencies. Most importantly, moving to the ASGC-RA will improve incentives for attracting health services to areas of genuine need. The new classification system will be phased in from July 2009.⁷ Full implementation is planned from 1st July 2010.

ASGC-RA is derived from the ARIA+ classification developed by GISCA. ARIA+ like its predecessor ARIA, is an unambiguously geographical approach to defining remoteness. ARIA+ is a continuous varying index with values ranging from 0 (high accessibility) to 15 (high remoteness), and is based on road distance measurements from 11,879 populated localities to the nearest service centres in five size categories based on population size. It is a purely geographic measure of remoteness, which excludes any consideration of socio-economic status, rurality and populations size factors (other than the use of natural breaks in the population distribution of Urban Centres to define the service centre categories).⁸

Service Centres - are populated localities where the population is greater than 1000 persons. The Urban Centre/Locality Structure of the 2001 ASGC has been used to define the areal extent and population of these areas. The table below shows the population break points that were used to group Urban Centres into the five Service Centre categories. The ARIA+ analysis considers about 730 services centres in determining remoteness values across Australia. These service centres are a subset of the 11,879 populated localities. In instances where the ABS defined Urban Centres are split by a state boarder, such as in the case of Albury and Wodonga, the population and spatial extents for each of these Urban Centres have been combined and treated as one service centre.

⁶ Commonwealth Department of Health and Aged Care (2001). Measuring Remoteness: Accessibility/Remoteness Index of Australia (ARIA). Occasional Papers: New Series Number 14.

⁷ Australian Government Department of Health and Ageing (2009) Rudd Government Confronts the Rural Health Challenge. Available: <http://www.health.gov.au/internet/budget/publishing.nsf/Content/budget2009-hmedia04.htm>

⁸ GISCA(u.d.) About ARIA+ (Accessibility/Remoteness Index of Australia). Available http://www.gisca.adelaide.edu.au/products_services/ariav2_about.html

Service Centre Category	Urban Centre Population
A	250,000 persons or more
B	48,000 – 249,999 persons
C	18,000 – 47,999 persons
D	5,000 – 17,999 persons
E	1,000 – 4,999 persons

The ARIA+ methodology regards services as concentrated into Service Centres. Populated localities with populations of greater than 1000 persons are considered to contain at least some basic level of services (for example health, education, or retail), and as such these towns and localities are regarded as Service Centres. Those Service Centres with larger populations are assumed to contain a greater level of service provision. A total of 738 Service Centres, classified by their population into five categories, were used in the ARIA+ methodology.

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.⁹ A broad comparison of these systems is displayed below.

Remoteness classifications

Broad Category	RRMA			DoHA ARIA			ASGC Remoteness		
	Fine Category	Population (000,000)	%	Category	Population (000,000)	%	Category	Population (000,000)	%
Metropolitan	Capital Cities	11.6	64	Highly Accessible	14.9	81	Major Cities	12.1	66
	Other Metropolitan 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
							Migratory	<0.1	

Note: This table is a rough guide only; the various classes in each classification are not equivalent.

Source: AIHW Population Estimates; AIHW Australia's Health 2002.¹⁰

⁹ Australian Bureau of Statistics (2001). *Outcomes of ABS views on remoteness consultation, Australia*. ABS Cat No 1244.0.00.001. Canberra, ABS.

¹⁰ Australian Institute of Health and Welfare (2002). *Australia's health 2002*. Canberra: AIHW.