

NSW RURAL DOCTORS NETWORK MINIMUM DATA SET REPORT

30 NOVEMBER 2013



NSW RURAL DOCTORS NETWORK

NSW Rural Doctors Network 2013

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Suggested citation

NSW Rural Doctors Network (2013). Medical practice in rural and remote NSW: Minimum Data Set report as at 30th November 2013. Newcastle: NSW Rural Doctors Network.

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Acknowledgements

We would like to thank all rural and remote general practices and staff, Divisions of General Practice, Medicare Locals, Regional Training Providers, and others for their time, patience and contributions in providing the data used in this report and their commitment to the compilation of this data set. We also appreciate the time spent in validating the data and providing feedback.

NSW Rural Doctors Network activities are funded by the Australian and New South Wales Government.

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NSW Rural Doctors Network Minimum Data Set Report – 30 November 2013

1. Introduction

The NSW Rural Doctors Network regularly collects information on the GP Workforce from GPs and Practice Managers. We ask GPs to return an annual survey in August/September, and Practice Managers to return surveys in March and October. In addition, we collect information from Divisions of General Practice, Medicare Locals, Regional Training Providers, the Medical Board of Australia and other sources. Data has been collected since 2001. This report is based on snapshot data as at 30 November 2013 and while it covers RAs 2 to 5 only (for ease of comparison with national figures), RA 1 results relating to Aboriginal Medical Services in metropolitan areas are also critical for our work.

The NSW Rural Doctors Network is required by the Federal Government to collect the data, which is used to help inform policy and programme development at state and national levels.

We appreciate the participation of GPs and Practice Managers and other organisations providing information in this process. For the 2013 GP Survey and Practice Manager Survey, the combined response rate for GPs in RAs 2 to 5 was 79.32%. Such a high response rate helps to ensure the accuracy of the reports that we publish on the GP workforce. Such high response rates also ensure the relevance and value of the data for planning and policy purposes.

Information provided as part of this report is also used in producing the National Minimum Dataset Report (available on the NSW Rural Doctors Network website at www.nswrdn.com.au and go to News & Publications, Publications, GP Workforce Data, Reports).

Some brief comparisons and trends in data since 2003 for the GP workforce in RRMA 4 to 7 in NSW are presented in Appendix 1.

2. Demographics of the rural and remote GP workforce

This section will enumerate the rural and remote medical workforce by RA, age and gender. Data indicated that as at 30 November 2013, the number of medical practitioners practicing in RA 2 to 5 locations was 2181. This is an increase of 178 compared with the previous period. Table 1 presents the total number of medical practitioners working in RA 2 to 5 as at 30th November 2013. Note that GPs and GP Registrars attached to the Royal Flying Doctor Service and based in Broken Hill and Dubbo have been included in these figures.

Table 2 provides a breakdown of this distribution by gender and RA.

Table 1 Practitioner numbers by RA

RA2	RA3	RA4	RA5	Total
1733	416	29	3	2181

Table 2 Gender by RA

RA	Male	Female	%Female	Total
RA2	1059	674	38.9	1733
RA3	275	141	33.9	416
RA4	23	6	20.7	29
RA5	2	1	33.3	3
Total	1359	822	37.7	2181

Table 2 indicates that the proportion of female practitioners in RA 2 areas is comparatively higher than any other RA. Figure 1 displays the percentage of female practitioners by RA compared with the state average for rural and remote female practitioners. Figure 2 provides a breakdown of the number of rural and remote medical practitioners by gender and age categories. Figure 3 displays the proportion of male and female practitioners in age categories.

Figure 1 Percentage of female practitioners by RA

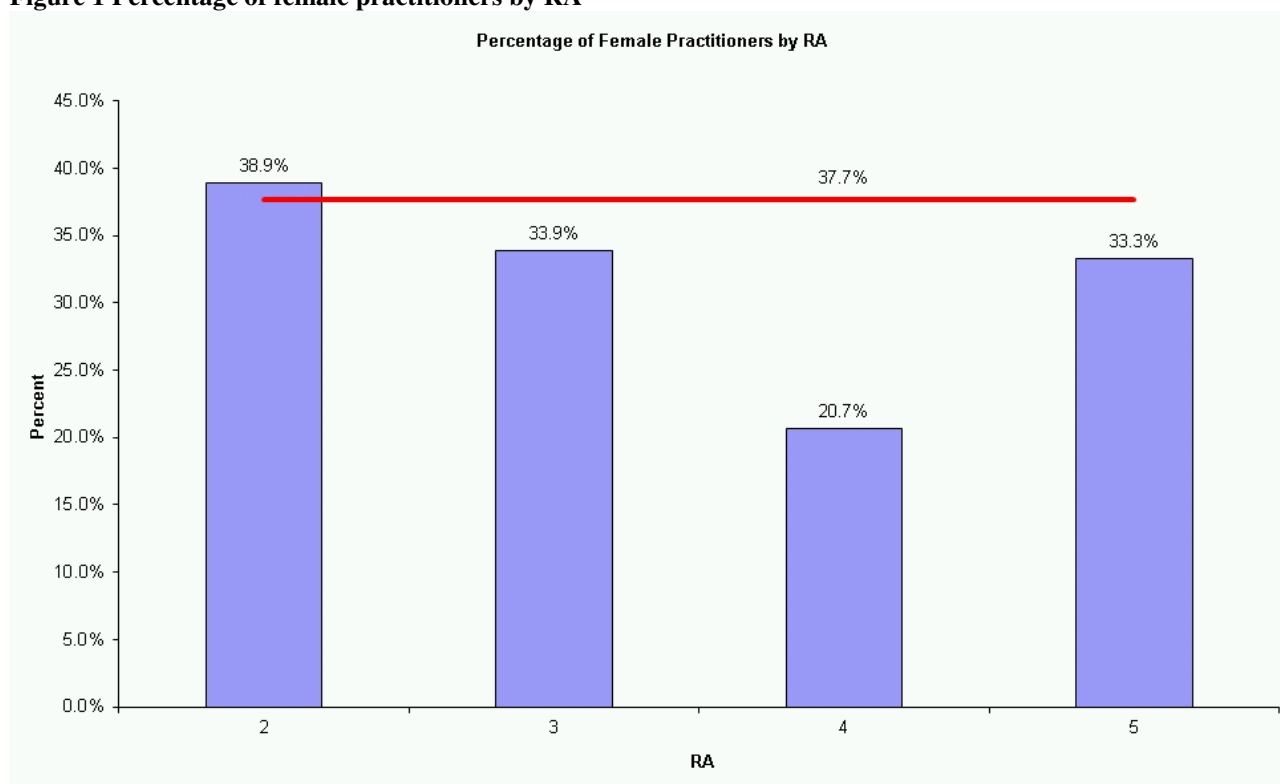


Figure 2 Number of rural and remote medical practitioners by age categories

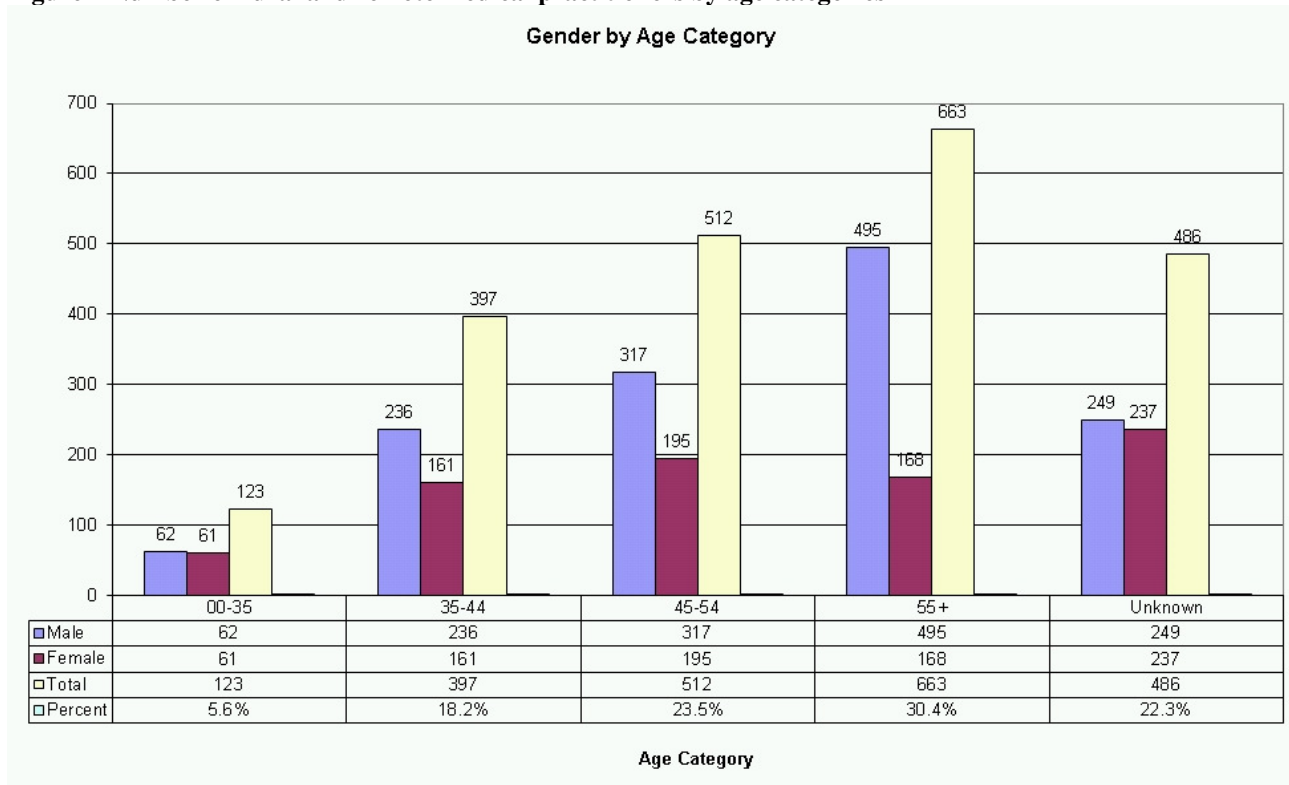
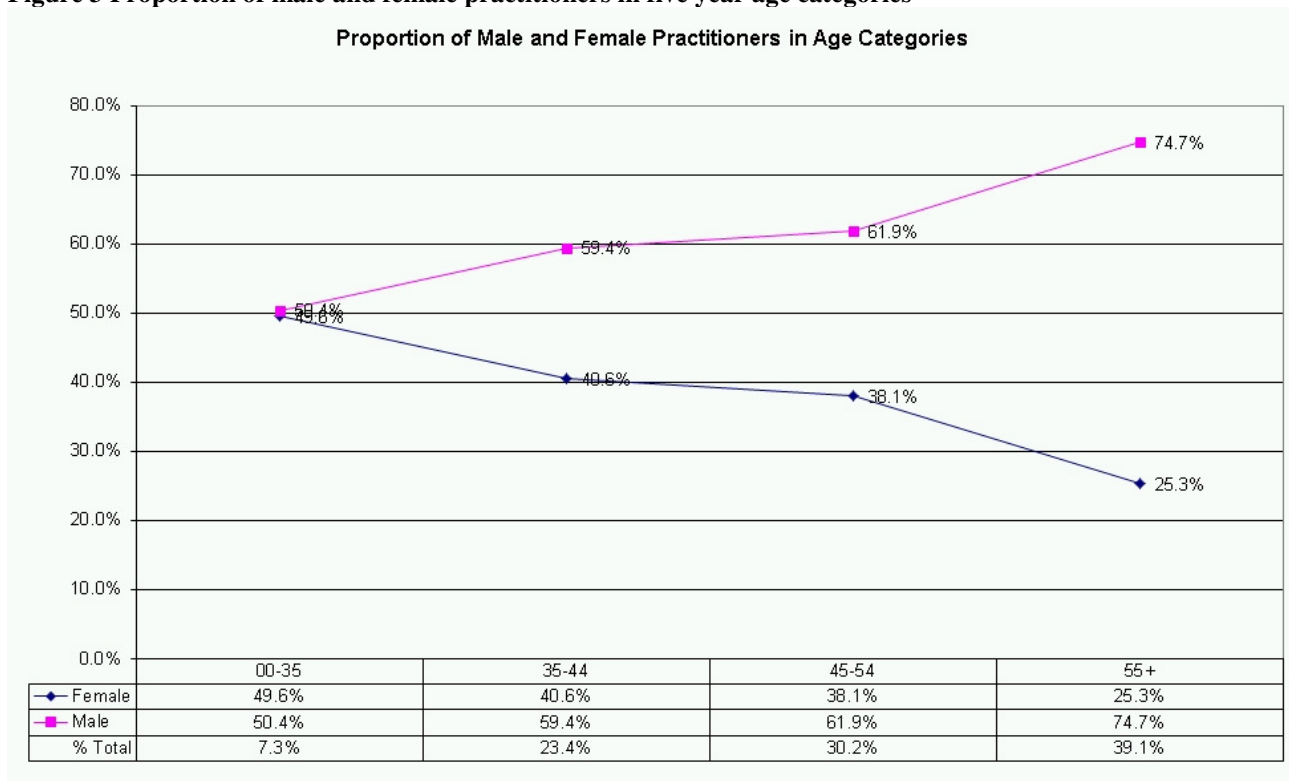


Figure 3 Proportion of male and female practitioners in five year age categories



The average age for male GPs was 52.9 (N=1110) years and 48.4 years for females (N=585). The overall average age for all practitioners (N=1695) was 51.3 years. Table 3 displays gender distribution by broad age categories by RA.

Table 3 Practitioner ages by gender and RA - broad age categories

Age Category	Gender	RA2	RA3	RA4	RA5	Total
< 35	Male	45	16	1	-	62
	Female	48	13	-	-	61
	Total	93	29	1	-	123
35-44	Male	173	55	8	-	236
	Female	132	26	3	-	161
	Total	305	81	11	-	397
45-54	Male	245	68	4	-	317
	Female	152	41	2	-	195
	Total	397	109	6	-	512
55 +	Male	394	92	7	2	495
	Female	138	29	-	1	168
	Total	532	121	7	3	663
Unknown	Male	202	44	3	-	249
	Female	204	32	1	-	237
	Total	406	76	4	-	486
Total	Male	1059	275	23	2	1359
	Female	674	141	6	1	822
	Total	1733	416	29	3	2181

3. Workloads

Estimates of Full Time Equivalent (FTEs) and Full Time Workload Equivalent (FWEs) as used by Medicare Australia (formerly 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 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 \$86,727¹ (2003-2004) 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 2002-2003 reference period, this value for vocationally registered doctors was \$221,864.²

¹ Australian Government Department of Health and Ageing. (2005). *RFT 127/0405 - Request for tender for a medical workforce profile project*. Canberra: ADoHA

² Ibid

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 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 75.4% of the total number of GPs. Data as displayed in Table 4 indicates that 56.4% of respondents worked 35 hours a week or more in the provision of routine clinical GP services.

Table 4 Self-reported GP clinical hours

Hours	Frequency	Percent
Less than 20 hours	197	12.0%
20 to 35 hours	520	31.6%
35 hours plus	928	56.4%
Total	1645	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, supervision time etc. are not included. The average number of GP clinical hours reported was 34.6 hours per week (N1645).

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

Table 5 Self-reported GP clinical hours by gender

Clinical Hours	Male		Female	
	Number	Percent	Number	Percent
Less than 20 hours	83	8.2%	114	18.2%
20 to 35 hours	263	25.9%	257	40.9%
35 hours plus	671	66.9%	257	40.9%
Total	1017	100.0%	628	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 36.5% of practitioners. Table 6 displays self-reported total weekly hours while Table 7 displays total hours by gender. The average reported total hours were 42.5 hours per week (N=795).

Table 6 Self-reported total hours

Hours	Number	Percent
Less than 20 hours	35	4.4%
20 to 35 hours	146	18.4%
35 hours plus	614	77.2%
Total	795	100.0%

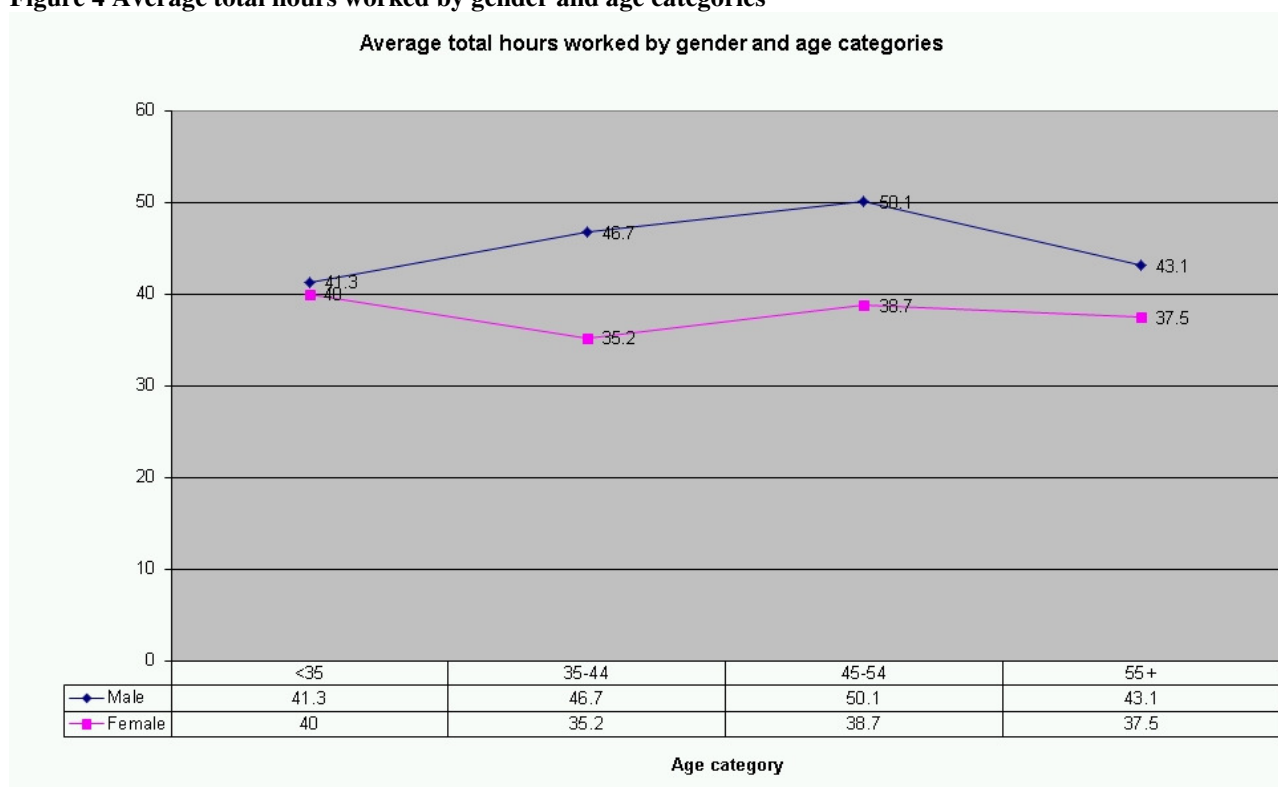
Data indicates that 22.8% of practitioners are currently working part time as defined by the ABS (i.e. less than 35 hours per week).

Table 7 Self-reported total hours by gender

Total Hours	Male		Female	
	Number	Percent	Number	Percent
Less than 20 hours	14	2.8%	21	7.2%
20 to 35 hours	56	11.1%	90	30.8%
35 hours plus	433	86.1%	181	62.0%
Total	503	100.0%	292	100.0%

Data for both self reported GP and self reported total hours, appears to be in line with national trends that suggest that female practitioners tend to work less hours compared with their male counterparts (AMWAC, 2005; CDHAC, 2001). A more refined breakdown of average total hours by gender and age categories is presented in Figure 4.

Figure 4 Average total hours worked by gender and age categories



4. Length of stay in current principal practice

The average length of stay in current principal practice was 8.14 years. A more refined breakdown by duration and RA is provided in Table 8.

Table 8 Length of stay in current practice by RA

	Duration							Total
	< 6mths	6-12 mths	1-3 yrs	3-5 yrs	5-10 yrs	10-20 yrs	20 yrs +	
RA 2	182	253	366	207	240	220	265	1733
RA 3	60	62	94	37	52	55	56	416
RA 4	6	5	11	1	3	2	1	29
RA 5	-	-	-	-	1	1	1	3
Total	248	320	471	245	296	278	323	2181

Data indicates that while 74.0 % (N=1613) of respondents have practiced in their current rural and remote locations for more than a year, 26.0% (N=568) 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 RA 2 to 5 locations. However, 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 2013 is detailed in Table 9 and Table 10 (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 Table 9 and Table 10 (N=196) is therefore less than the total number of procedures documented (N=267). Of the 196 procedural practitioners, 60 (30.6%) perform multiple procedures. A Venn diagram illustrating practitioners undertaking single or multiple procedures is displayed in Figure 5. Gender composition of proceduralists compared to the general rural and remote medical workforce is displayed in Figure 6.

Table 9 Number of practitioners undertaking procedural work by type

Procedure	Number
Anaesthetics General	95
Obstetrics Normal delivery	99
Surgery Operative	73
Known Proceduralists**	196
Total Practitioners	2181

Table 10 Number of practitioners undertaking procedural work by type and RA

	RA2	RA3	RA4	RA5	Total*
Anaesthetics General	57	38	-	-	95
Obstetrics Normal Delivery	62	35	2	-	99
Surgery Operative	54	19	-	-	73
Known Proceduralists**	134	60	2	-	196
Total Practitioners *	1733	416	29	3	2181

* GPs practicing in RAs 2 - 5

** GPs practicing in at least one procedural field

Figure 5 Venn diagram illustrating numbers undertaking single or multiple procedures (N=196)

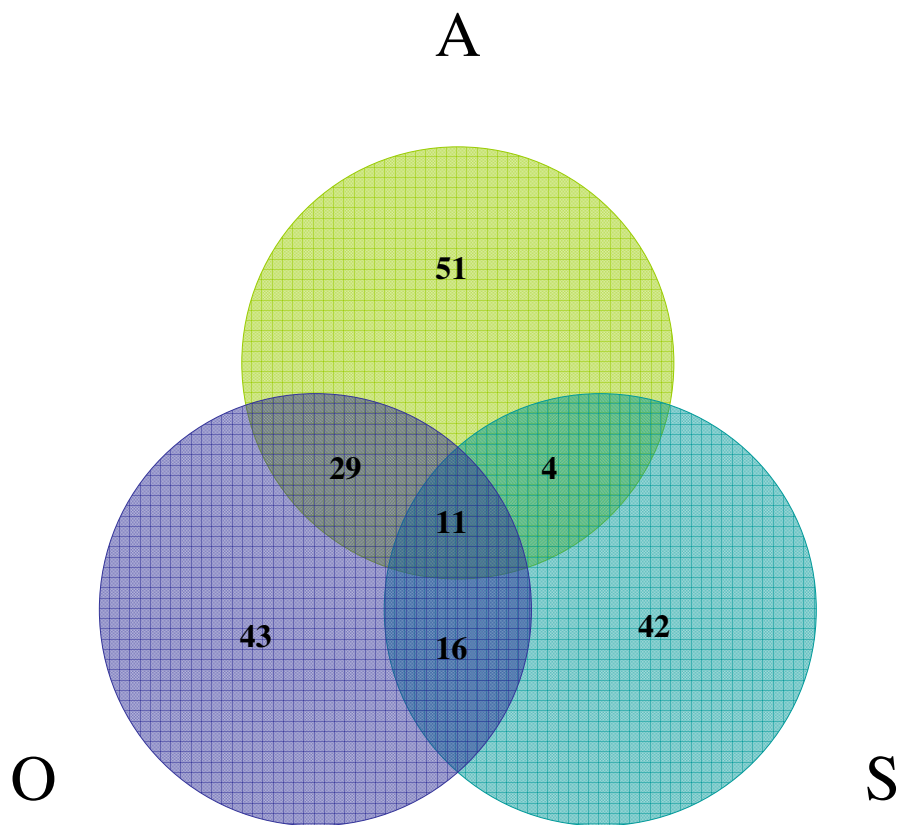
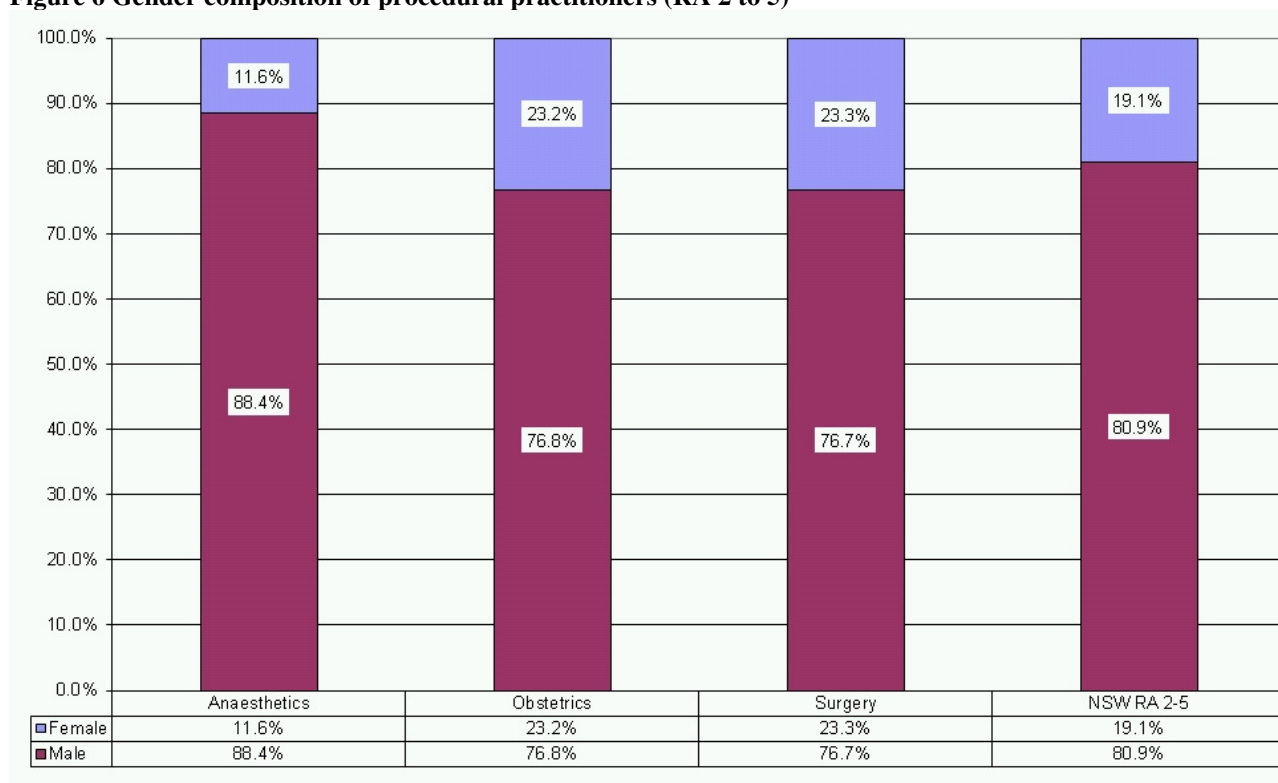


Figure 6 Gender composition of procedural practitioners (RA 2 to 5)



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. Table 11 and Table 12 display these figures by RA.

Table 11 Number and proportions of practitioners providing emergency care services by RA

RA	Number	Percent
RA2	237	68.9%
RA3	98	28.5%
RA4	7	2.0%
RA5	2	0.6
Total	344	100.0%

Table 12 Number and proportions of practitioners providing Aboriginal health services by RA

RA	Number	Percent
RA2	227	72.1%
RA3	81	25.7%
RA4	7	2.2%
RA5	0	0.0
Total	315	100.0%

7. Types of practice

The number of GPs working in each practice type by RA was also explored. Table 13 displays the number of doctors working in each practice type by RA. Data was missing or inadequately described for 155 practitioners. The number of practices known to be in business at 30 November 2013 in RAs 2 to 5 was 614.

Table 13 Practice type by RA

RA	Solo		Group	
	Number	Percent	Number	Percent
2	203	10.0%	1398	69.0%
3	90	4.4%	305	15.1%
4	9	0.4%	20	1.0%
5	1	0.1	-	0.0
Total	303	15.0%	1723	85.0%

8. Primary Income Source

Table 14 below displays self-reported data on primary income source. Data was available for 1382 (63%) 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.

Table 14 Self-reported primary income source

Primary Income Source	Number	Percent
Fee for service	1108	80.2%
Private practice wage or salary	187	13.5%
Non government wage or salary	14	1.0%
Aboriginal community controlled health service salary	41	3.0%
Other	32	2.3%
Total	1382	100.0%

9. Primary Model of Service Provision

Table 15 below displays self-reported data on primary models of service provision. Data was available for 2124 (97%) 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 15 Primary model of service provision

Primary Model of service provision	Number	Percent
Resident GP	1748	82.3%
"Fly in Fly Out"	6	0.3%
Member of a Primary Health Care Team	28	1.3%
Hospital based GP	6	0.3%
Registrar	336	15.8%
Total	2124	100.00%

10. Registrars

The number of registrars currently working in RA 2 to 5 locations was 336. Data indicates that registrars comprise approximately 15.4% of the rural and remote medical workforce.

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 16 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 on call.

Table 16 Average hours available on call and average hours on call worked

	Number	Minimum	Maximum	Average
Hours per week on call worked	368	0.25	40	10.6
Hours per week available on call	447	1.0	168	56.7

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 desired. All other responses have been filtered out. Data for the valid responses indicate that there is an average 2.7 week deficit between annual leave wanted and annual leave taken.

Table 17 Average leave wanted and average leave taken (weeks)

	Number	Minimum	Maximum	Average
Annual leave taken	710	0.5	10.0	4.5
Annual leave wanted	636	1.0	10.0	6.0
Deficit	421	.05	10.0	2.7

13. Citizenship, Qualifications and Registration

Respondents were asked to indicate their citizenship status. Information was provided by 1472 respondents. A breakdown by RA reveals that RA 3 and 4 locations have a greater proportional reliance on temporary resident doctors.

Table 18 Citizenship by RA

Citizenship	RA 2	RA 3	RA 4	RA 5	Total
Australian	987	230	7	3	1227
New Zealand	19	7	2	-	28
Permanent Resident	119	55	4	-	178
Temporary Resident	28	10	1	-	39
Total	1153	302	14	3	1472
Percent Temporary	2.4	3.3	7.1	0.0	2.6

Respondents were asked to indicate the university of their primary medical degree. The following tables show that more than two-fifths of the doctors have qualifications from overseas, with the most prominently represented global regions being Southern Asia, Western Europe and Africa. It should be noted that many respondents with overseas qualifications migrated to Australia many decades ago. Amongst Australian trained doctors, the majority had degrees from Sydney University, the University of New South Wales and the University of Newcastle. The majority gained their qualifications in the 1970s and 1980s.

Table 19 Number and Percent by Location of Training

Place of Training	Number	Percent
Overseas	909	41.7
Australia	1094	50.2
Unknown	178	8.1
Total	2181	100.0

Table 20 Origin of Primary Medical Degree by RA (excluding Australia)

Global Region	RA 2	RA 3	RA 4	RA 5	Total
Africa	100	28	5	-	133
Australasia (excluding Australia)	29	7	-	-	36
Central America	3	1	-	-	4
Central Asia	2	-	-	-	2
East Asia	50	7	-	-	57
Eastern Europe	46	14	1	-	61
Middle East	53	17	-	-	70
North America	9	4	-	-	13
Pacific	7	2	-	-	9
South America	5	5	-	-	10
South East Asia	40	11	1	-	52
Southern Asia	211	71	4	-	286
Western Europe	136	34	6	-	176
Total	691	201	17	-	909

Table 21 University and Decade of Graduation (Australian trained only)

University	1940s	1950s	1960s	1970s	1980s	1990s	2000s	2010s	Total *
Adelaide	-	-	5	5	7	9	5	-	34
Australian National	-	-	-	-	-	-	6	-	7
Flinders	-	-	-	-	7	143	13	-	34
Griffith	-	-	-	-	-	-	1	-	2
James Cook	-	-	-	-	-	-	1	-	3
Melbourne	-	1	5	12	14	5	8	-	48
Monash	-	-	1	12	13	14	4	-	47
Newcastle	-	-	-	-	39	44	31	1	119
New South Wales	-	-	4	103	100	46	29	1	289
Notre Dame	-	-	-	-	-	-	-	1	2
Queensland	-	-	4	21	20	9	44	1	106
Sydney	1	7	32	129	98	41	56	1	375
Tasmania	-	-	-	2	5	6	2	-	16
Western Australia	-	-	1	2	1	3	2	-	9
Wollongong	-	-	-	-	-	-	-	3	3
Total	1	8	52	286	304	190	203	8	1094

* Total includes 42 with unknown year of graduation.

Respondents were asked to provide information regarding registration status. About 7.4% of respondents had conditions on their registration.

Table 22 Registration Status

Registration Status	Number	Percent
Full	1942	89.0
Conditional	156	7.2
Unknown	83	3.8
Total	2181	100.0

There were 161 international medical graduates with Area of Need registration and 107 overseas trained GPs working in RA 2 to 5 at 30 November. At least 51% of doctors working in general practice in RA 2 to 5 were vocationally registered.

14. Visiting Medical Officers

Respondents were asked to indicate if they held Visiting Medical Officer status at any hospitals. Overall, about 32.5% of the doctors had appointments. RA 4 had the greatest reliance on VMOs. Amongst Local Health Districts, where data was available for 2176 respondents, Hunter New England and Murrumbidgee had the greatest reliance on VMOs. Significant numbers of registrars also had appointments.

Table 23 VMO by RA at 30 Nov 2013

RA	Number of VMOs	Number of GPs	Percent VMO
2	516	1733	29.8
3	179	416	43.0
4	12	29	41.4
5	2	3	66.7
Total	709	2181	32.5

Table 24 VMO and Registrar by Local Health District

Local Health District	VMO, not Registrar	VMO and Registrar	Not VMO and not Registrar	Not VMO and Registrar	Total	Percent VMO
Albury Wodonga	14	0	37	12	63	22.2
Far West	4	1	32	1	38	13.2
Hunter New England	177	26	230	49	482	42.1
Illawarra Shoalhaven	23	2	92	21	138	18.1
Mid North Coast	63	2	189	29	283	23.0
Murrumbidgee	94	26	114	24	258	46.5
Nepean Blue Mountains	5	0	24	4	33	15.2
Northern NSW	77	15	171	31	294	31.3
Northern Sydney	0	0	2	0	2	0.0
South Eastern Sydney	0	0	1	0	1	0.0
South Western Sydney	25	0	41	8	74	33.8
Southern NSW	51	4	122	21	198	27.8
Western NSW	90	7	156	51	304	31.9
Western Sydney	0	0	4	4	8	0.0
Total	623	83	1215	255	2176	32.4

15. Summary

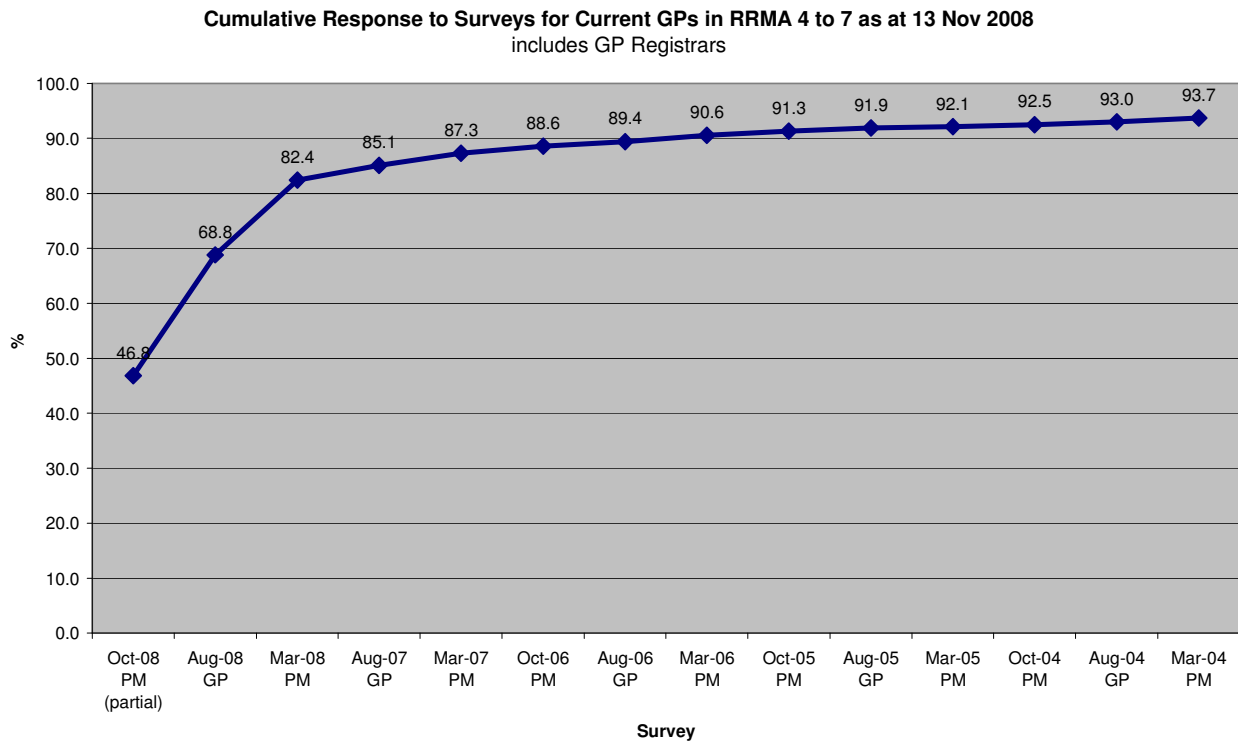
The data provided in this report has been based on agreed elements for a national Minimum Data Set for Rural Workforce Agencies. While the data may differ to that produced by Medicare Australia, we believe that it is probably as valid since numbers reported reflect ‘on ground’ realities and are based 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, NSW Rural Doctors Network is satisfied that the data provides a relatively accurate portrayal of medical service provision in rural and remote areas of the state as at the 30th November 2013 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 NSW Rural Doctors Network. Survey responses are largely used to validate and update known data. The response rate for the current data collection period was 79.30%. Figure 7 indicates that a cumulative response rate of over 90% is achieved when responses for the previous three years are considered. This indicates that while not all GPs respond in each year, the majority will return at least one recent survey.

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

Figure 7 Cumulative Survey Response



16. Terminology

ABS	Australian Bureau of Statistics
ACCCHS	Aboriginal Community Controlled Health Service
AMWAC	Australian Medical Workforce Advisory Committee
CDHAC	Commonwealth Department of Health and Aged Care (now Australian Government Department of Health and Ageing)
AGDoHA	Australian Government Department of Health and Ageing
FTE's	Full-time equivalents (calculated on HIC billings of \$82,414 or more)
FWE's	Full-time workload equivalents (calculated on average HIC billings for full-time doctors - (\$221,864 for 2002-2003 reference period)
HIC	Health Insurance Commission (now Medicare Australia)
RA	Australian Standard Geographical Classification – Remoteness Area
RHW	Rural Health Workforce Australia (formerly Australian Rural and Remote Workforce Agencies Group)
RFDS	Royal Flying Doctor Service
RRMA	Rural Remote and Metropolitan Area Classification
RWA	Rural Workforce Agency

17. References

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Appendix 1

ASGC RA 2 to 5 Data as at 30 November 2013

	2010	2011	2012	2013
Total practitioners (including registrars)	1820	1940	2003	2181
Percent female	33.7	35.6	37.1	37.7
Percent male	66.3	64.4	62.9	62.3
Average age female	47.7	47.9	48.2	48.4
Average age male	52.5	52.9	53.3	52.9
Average age (all)	51.0	51.2	51.5	51.3
Average GP clinical hours	35.7	35.6	35.0	34.6
Average total hours	43.2	43.2	43.1	42.5
Average length of stay in current practice (years)	9.2	8.9	8.6	8.1
*Proceduralists General Anaesthetics	99	90	97	95
*Proceduralists Obstetrics (Normal delivery)	106	98	106	99
*Proceduralists Operative surgery	80	75	81	73
*Known Proceduralists (practising in at least one procedural field)	200	171	209	196
* Proportion of rural practitioners providing procedural services	11.0	8.8	10.4	9.0
Proportion of GPs working in solo practices	16.7	15.5	15.5	15.0
Proportion of GPs working in group practices	83.3	84.5	84.5	85.0

Historical Trend Data based on RRMA 4 to 7 locations as at 30 November, 2003 to 2009

	2003	2004	2005	2006	2007	2008	2009
Total practitioners (including registrars)	1126	1164	1198	1173	1185	1268	1303
Percent female	26.9	28.4	28.3	29.1	30.0	30.8	32.0
Percent male	73.1	71.6	71.7	70.9	70.0	69.2	68.0
Average age female	44.5	45.2	45.9	45.8	47.0	46.4	47.2
Average age male	49.7	50.1	50.7	50.4	51.9	51.1	51.7
Average age (all)	48.4	48.8	49.4	49.1	50.5	49.7	50.3
Average GP clinical hours	33.9	33.0	33.6	35.2	34.6	36.3	35.9
Average total hours	45.9	44.9	46.2	44.8	47.1	44.7	45.0
Average length of stay in current practice (years)	9.9	9.9	10.1	10.2	11.03	9.71	9.63
*Proceduralists General Anaesthetics	103	99	100	88	84	92	98
*Proceduralists Obstetrics (Normal delivery)	154	152	149	122	113	117	109
*Proceduralists Operative surgery	61	67	62	61	56	63	77
*Known Proceduralists (practising in at least one procedural field)	239	233	230	201	185	190	190
* Proportion of rural practitioners providing procedural services	21.2	20.0	19.2	17.1	15.6	15.0	14.6
Proportion of GPs working in solo practices	21.8	25.7	24.6	23.1	21.4	21.1	18.6
Proportion of GPs working in group practices	78.2	74.3	75.4	76.9	78.6	78.9	81.4

Appendix 2

Rural, Remote and Metropolitan Area Classification (RRMA) and Accessibility/Remoteness Index of Australia (ARIA)³ 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. Full implementation of the ASGC RA classification commenced on 1 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 remotes, 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).⁴

³ Measuring Remoteness: Accessibility/Remoteness Index of Australia (ARIA). Occasional Papers: New Series No. 14. Commonwealth Department of Health and Aged Care. Further information is available from the department website <http://www.health.gov.au/ari/aria.htm>

⁴ GISCA (u.d.) About ARIA+ (Accessibility/Remoteness Index of Australia). Available http://www.gisca.adelaide.edu.au/products_services/ariav2_about.html

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 real 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 service 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 border, 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.

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 provide a greater level of service. 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 Structure⁵. 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
							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 2002.⁶

⁵ Australian Bureau of Statistics (2001). *Outcomes of ABS views on remoteness consultation, Australia*. ABS Cat No 1244.0.00.001. Canberra, ABS.

⁶ Australian Institute of Health and Welfare (2002). *Australia's health 2002*. Canberra: AIHW.



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