



Health Workforce

Queensland

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**Submission to Review of the Rural, Remote and Metropolitan Areas
(RRMA) Classification**

29th April, 2005

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1. Introduction

Health Workforce Queensland, formerly known as the Queensland Rural Medical Support Agency (QRMSA), is a rural workforce agency, established in 1998 and funded by the Department of Health and Ageing. A forerunner of the current organisation was the Queensland Rural Divisions Coordinating Unit (QRDCU). Our purpose is:

- To facilitate the recruitment, retention and quality of general medical practitioners and primary health care teams in rural and remote Queensland communities.

Our primary objectives are:

- To increase the number of GP services and increase access to GP services in rural and remote Queensland
- Retain GPs in rural and remote Queensland
- Support upskilling of GPs and other supporting health professionals in rural and remote Queensland
- Develop sustainable models for general practice in rural and remote Queensland
- Establish benchmark workforce data and research to inform and direct policy.

2. The RRMA Classification

As a Rural Workforce Agency, Health Workforce Queensland has worked with the RRMA classification system since its introduction. We would acknowledge that the system does have anomalies, however we believe that many of these are due to the failure to adjust for population changes since the 1991 Census.

The strengths of the RRMA classification lie mainly in its simplicity and its intuitive appeal in the use of logical groupings of areas/zones within Australia. In relation to resource and funding allocations, the RRMA classification has worked reasonably effectively for rural and remote communities.

In anticipation of possible changes to the RRMA classification or the introduction of new classification systems, Health Workforce Queensland in 2001 undertook a series of analyses of potential ramifications of these more recently developed systems (e.g., Aria and AriaPlus/ASGC). These analyses were performed at a National for 11,763 to 11,894 locations and also for Queensland.

At the national level we can provide details of the number/percentage of locations/ communities that would be impacted by a change in classification systems. At the state (Queensland) level we can provide information as to the number of currently doctored towns and the number of practitioners that could be impacted by changes to the RRMA classification system. Tables detailing potential impacts by state/territory and for Queensland are presented in Appendix 1.

We are also aware that in October 2001, the then Department of Health and Aged Care put out an occasional paper in which it was stated "ARIA supersedes the RRMA classification and is considered to be a superior approach to measuring remoteness. It has been adopted as the Department's official approach to measuring remoteness and has been widely adopted as a national standard".

While Aria has been largely superseded by Aria Plus or the ASGC classification system there remains a very high correlation between ARIA and AriaPlus/ASGC. Conversely, there is a relatively low correlation between RRMA values and Aria or Aria Plus values. (see Appendix 1, Table 7). We also acknowledge that the Aria Plus/ASGC classification system has been adopted by the Australian Bureau of Statistics (ABS) and the Australian Institute of Health and Welfare (AIHW).

Despite this enthusiasm and inferred superiority of classification systems based on Aria and/or Aria Plus, we would urge extreme caution and careful analyses prior to any new classification system being adopted/implemented. As will be demonstrated in the tables contained in Appendix 1, changes to the current RRMA classification are likely to have very significant policy, resource allocation, funding and political ramifications.

3. The ARIA classification

The Aria classification system does have a number of advantages in that it differentiates between areas in terms of levels of accessibility/remoteness to population centres of specified populations. It is essentially a geographical measure based on road distance and as such does factor in distances from major cities, large provincial cities and smaller towns. However, unlike RRMA, it does not incorporate factors such as population size/density. In some states such as Queensland this can be problematic in that cities such as Townsville/ Thuringowa (population approximately 146,000) and Cairns (population approximately 122,000) can be classified as Moderately Accessible while many rural towns such as Dalby (population 10,130 and 215km from Brisbane) or Warwick (population 11,354 and 140km from Brisbane) are classified Highly Accessible.

Table 1 in the Appendix details current RRMA distributions across states. Table 2 based on Aria distributions presents a very different picture as to locations that may be eligible for rural assistance should Highly Accessible and Accessible locations become ineligible. The impact of an adoption of ARIA on states, such as Victoria and NSW, would be very high (e.g., 87.9% of Victorian locations and 83.5% of NSW locations would be considered Highly Accessible or Accessible) – see Table 2. The impact on Queensland would also be significant.

For Queensland, we are able to provide a more detailed analysis. Currently there are 983 medical practitioners working in RRMA 4 to 7 locations in Queensland. A change to Aria where Highly Accessible locations were excluded could result in 47 currently doctored locations and 417 medical practitioners becoming ineligible for current rural programs and assistance. On the converse side, approximately 470 practitioners in cities such as Townsville, Cairns, Mackay and Bundaberg could become eligible (see Table 5).

While access based on distance is an important consideration, we also strongly believe that access to secondary and tertiary hospital services is a crucial factor. Residents of rural and remote communities in general do not have this, residents of large provincial cities and Brisbane do. Access to secondary and tertiary hospital services is an important variable that we believe should be factored into any new classification system.

4. The Aria Plus/ASGC classification

Our comments in relation to the Aria Plus/ASGC classification system are essentially similar to those provided in relation to ARIA. As shown in (Appendix 1, Table 7) there is a very high

relationship between Aria and Aria Plus/ASGC values. It is essentially the category breaks that differ. Table 3 in the Appendix displays the distribution of the Aria Plus/ASGC categories across states/territories. Again states such as Victoria, NSW and Queensland would be significantly impacted. A detailed analysis of the potential impact on current RRMA 4 and 5 locations in Queensland is presented in Table 6. Assuming that the Major Cities and Inner Regional locations were excluded, it is possible that 61 currently doctored locations and 564 medical practitioners could become ineligible for current rural programs and assistance. Conversely, approximately 270 doctors in Townsville and Cairns could become eligible.

We also acknowledge that it would be possible to lower the cut off value and include Inner Regional locations. This would have the effect of including virtually all locations outside of the major metropolitan cities. Again, we would suggest that such a decision could have highly significant policy, resource allocation, funding and political ramifications that would be detrimental to rural and remote communities.

5. Other Measures/Indices

Health Workforce Queensland does not have any major problems with the addition/inclusion of other workforce measures and health and wellbeing indicators. However, we would suggest that many of these proposed measures or indicators do have many limitations. Additionally, we do not believe that their inclusion would change existing relativities to any significant extent. A further concern revolves around how these additional weightings would be derived and applied without sufficient testing and consultation. In our view, any new classification system would have to be relatively simple, comprehensible, transparent and equitable.

In the following section we will provide some comment on a number of the proposed additional workforce and health and wellbeing measures.

- **Doctor to population ratio's (DPR)** – while useful for descriptive purposes, DPRs do not reflect actual workloads and/or part time service provision.
- **Full time equivalent (FTE)** – useful for measuring medical services claimable through the HIC. Does not take into account many General Practice type services provided by salaried providers (State Health) in more remote communities or services not claimable through the HIC. Capping of FTE values at 1 and use of relatively low billing levels for calculation diminishes its utility as a workforce measure.
- **Full Time Workload Equivalent (FWE)** – probably a better measure of medical services provided in a region/area. Suffers from the same limitation of FTE in that it does not take into account many General Practice type services provided by salaried providers (State Health) in more remote communities or services not claimable through the HIC. The main advantage is that FWE tends to correlate fairly highly with number of full time practitioners over a given reference period.
- **Standardised Whole Patient Equivalents (SWPE)** – has some advantages in that the SWPE value for a region is the sum of the fractions of care provided by doctors in that region to their patients, weighted for the age and sex of each patient it adjusts for the age and gender of patients. Seen to work better for metropolitan and provincial locations as opposed to more remote communities. Again does not incorporate non-HIC data.

- **Socio-Economic Indexes for Areas (Seifa)** – we believe that the incorporation of Seifa Indexes could be a valuable addition to current classification systems. Its major asset is that it provides reasonably sound measures of socio-economic wellbeing. The links between socio-economic status and health inequalities have been well documented and Seifa measures could be used/weighted to adjust for differentials in regions. A problem with Seifa is that for particular regions (e.g., mining communities) the socio-economic status of the region can be artificially inflated.
- **Morbidity and mortality data** – we do not hold a strong belief in the accuracy, currency or reliability of morbidity and mortality data, especially for more rural and remote communities. We believe the collection and compilation of morbidity and mortality data can be ad hoc and differ substantially between jurisdictions. Other problems with these data including the poor collection of data in relation to Indigenosity and relatively low relationships between the two measures would lead us to suggest that morbidity and mortality data should not be included in any new classification system.
- **Population demographics** – we believe that measures incorporating population dynamics by gender and age could be useful. To a large extent these measures are incorporated in the SWPE calculations. We are uncertain as to what a separate calculation would achieve and the extent that it could possibly impact on existing relativities.

6. Index of Dispersion

It is our understanding that for the More Allied Health Services (MAHS) program, an index of dispersion was developed. This Index acknowledged and incorporated a factor to compensate for the travel and higher costs of providing health services in rural and remote communities. We would suggest that such an index could be incorporated in any new classification system.

7. Treatment of urban areas

Our interpretation of the RFT 128/0405 document – To Develop a Geographical Measure suggests that there is a strong desire to develop an indices that can differentiate between suburbs/localities within major cities. We acknowledge that there are some problems in medical workforce supply and demand in metropolitan and outer metropolitan areas.

We would suggest the possible development of a Negative Metropolitan Index with a range from 0 to –3 (minus 3) incorporating measures such as FTE, FWE, SWPE, Seifa and distance from secondary and tertiary hospital services. For example, an inner city suburb with relatively good access to GP, After Hours and hospital services may have an index value of –0.1. In contrast, an outer metropolitan suburb with relatively poor access to GP, After Hours and hospital services may have an index value of –3.

While we acknowledge and can empathize with medical workforce shortages in some metropolitan areas, we would suggest that metropolitan and outer metropolitan residents have a far greater choice of options and access to medical and hospital services compared to residents of a community such as Kilcoy. Yet, under the ARIA and Aria Plus/ASGC classification system, a community such as Kilcoy (94km from Brisbane) would be considered Highly Accessible or Inner Regional and assigned a similar classification as a suburb such as Wacol in the Brisbane outer metropolitan area.

We strongly believe that there is a case for differentiation and that a separate negative index for metropolitan areas should not impact on rural communities or current funding streams.

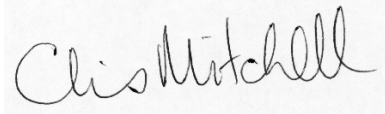
8. Summary

- Health Workforce Queensland acknowledges that there are some anomalies in the current RRMA classification. We would suggest however, that many of these anomalies are due to the failure to adjust the RRMA classification for changes in population sizes and densities over time, although more current information is available.
- Alternate classification systems such as Aria and Aria Plus/ASGC are intuitively more appealing in that they are based on road distance from differing classes of population/service centres. However, these classification systems have the potential to create even greater anomalies in that large provincial cities with populations in excess of 100,000 people could be considered rural and become eligible for programs and incentives designed for rural communities.
- An analysis of potential implications at both a national and state (Queensland) levels would suggest that many locations currently considered rural could possibly become ineligible under an Aria or Aria Plus/ASGC based classification system. The impact of these changes would be greater in states such as Victoria and NSW. Queensland would also be significantly affected.
- Detailed data for Queensland has been presented in relation to the implications of possible changes in classification systems. Projections suggest that between 47 and 61 currently doctored locations and between 417 and 564 medical practitioners in RRMA 4 to 7 locations could be affected. This is quite significant in light of the fact there are currently only 983 medical practitioners in RRMA 4 to 7 communities in Queensland.
- We strongly believe that access to secondary and tertiary medical services is a crucial factor that should be included in any measure of access to medical services. We note the increasing trend for Health Authorities to downgrade medical services in rural and remote communities and to compel people from rural communities to travel to larger provincial and metropolitan centres in order to access appropriate medical services. While distance is an important factor, we find it difficult to comprehend that locations such as Townsville or Cairns could possibly be considered Moderately Accessible or Outer Regional while other rural communities such as Warwick would be considered Highly Accessible or Inner Regional.
- Health Workforce Queensland has anticipated the review of the RRMA classification system since 2001. We have compiled the necessary data for comparisons as detailed in Appendix 1. These data would suggest that changes to the current RRMA classification could have very significant policy, resource allocation, funding and political ramifications that are likely to be detrimental to rural and remote communities.
- We have also explored the treatment of urban areas and have suggested the development of a Negative Metropolitan Index that would not impact on current classification systems. We have also noted that despite the perceived lack of access to medical services in metropolitan and outer metropolitan areas, residents in these areas have a much greater access and availability to secondary and tertiary medical services compared to rural and remote residents.

- We have not committed to the use of other possible indices. Each has particular or possible limitations. Measures that we would possibly support would include; Seifa FWE, SWPE and Population demographics.
- We believe that the relative costs of providing medical services in rural and remote communities should be factored into funding allocation (e.g., MAHS index).
- Again, we would suggest that the potential impact of a new classification system on rural and remote communities has not been fully considered. We would attribute this lack of consideration to the urban-based focus and influence of a number of nationally based medico-political organizations.
- There are a number of principles that we believe must be incorporated into any new classification system. These include:
 - Any new classification system would have to be relatively simple, comprehensible, transparent and equitable.
 - The development of a new measure must not create further disadvantage for rural and remote areas of Australia.
 - The development and trailing of any new measure must involve consultation with a wide variety of stakeholders.
 - Any new classification system should be widely accepted as an improvement on current systems and should not impact negatively on funding and services available for rural and remote communities.
 - Any new classification system should incorporate a transition period to allow communities/practices that may be negatively impacted in relation to funding or services, sufficient time to adjust.
 - Any new classification system should automatically revised on an agreed periodic basis with a minimum of 6 months to allow adjustment prior to the implementation (e.g. review result 31st December with implementation 1st July)
 - The extra costs associated with providing health services in rural and remote communities should be factored into any new classification system.

Health Workforce Queensland has appreciated the opportunity to provide input to this Review. While acknowledging that the current RRMA does have anomalies, we again suggest that possible revised classification systems based on Aria or Aria Plus/ASGC have the potential to introduce even greater anomalies. We would also suggest that the possible policy, funding and resource allocation impacts of any new classification system would need to be carefully considered and costed.

Yours sincerely

A handwritten signature in black ink that reads "Chris Mitchell". The signature is written in a cursive style and is placed on a light grey rectangular background.

Chris Mitchell
Chief Executive Officer
Health Workforce Queensland

Appendix 1

The following tables are based on RRMA, ARIA and ARIA Plus/ASGC calculations from GISCA for 11763 to 11894 Australian locations. It should be noted that for many metropolitan locations/suburbs, RRMA, ARIA or ASGC values have not been assigned as they are generally assigned a value of 1 under the RRMA classification system or a value of 0 under the ARIA and ARIA+/ASGC classification systems.

Table 1 - displays current RRMA distributions across states.

Table 2 - ARIA (based on distances) presents a very different picture in regard to remoteness.

Table 3 - Aria Plus/ASGC distributions by state – again display significantly different patterns in relation to remoteness.

Table 4 - Alternate ARIA table based on 11278 locations (sourced from DHAC website - 2001)

Table 1 – RRMA distribution by state

State	RRMA1	RRMA2	RRMA3	RRMA4	RRMA5	RRMA6	RRMA7	(blank)	Grand Total	% RRMA 4 and above
ACT	15				3				18	16.67
NSW	418	312	160	467	1765		236	6	3364	73.37
NT	4				18	5	228		255	98.43
OTHER								4	4	0.00
QLD	157	59	68	68	1087	140	403	2	1984	85.58
SA	31		5	22	773		340	1	1172	96.84
TAS	70		41	55	549		26	1	742	84.91
VIC	244	13	50	163	2072		128		2670	88.50
WA	161			82	497	168	642	4	1554	89.38
Total	1100	384	324	857	6764	313	2003	18	11763	84.48

This table is based on Aria categories - the headings are A - Accessible; HA - Highly Accessible; MA - Moderately Accessible, R - Remote; and VR - Very Remote

Table 2 – Aria distribution by state

State	A	HA	MA	R	VR	(blank)	Grand Total	"% Mod Accessible, Remote and Very Remote"
ACT		18					18	0.00
NSW	1290	1317	404	99	51	203	3364	16.47
NT	3		28	47	148	29	255	87.45
OTHER					1	3	4	25.00
QLD	419	547	536	183	187	112	1984	45.67
SA	364	163	299	124	181	41	1172	51.54
TAS	427	114	140	4	26	31	742	22.91
VIC	933	1377	316	7		37	2670	12.10
WA	284	287	332	244	307	100	1554	56.82
Total	3720	3823	2055	708	901	556	11763	31.15

This table is based on Aria+/ASGC categories – headings are: IR – Inner Regional Australia (0.21 to 2.4), MC – Major Cities of Australia (0.00 to 0.20), OR – Outer Regional Australia (2.41 to 5.92), R – Remote Australia (5.93 to 10.53), VR – Very Remote Australia (10.54 to 15).

Table 3 - Aria Plus/ASGC distribution by state

State	IR	MC	OR	R	VR	Grand Total	%MC and IR	%OR to VR
ACT	6	12				18	100.00	0.00
NSW	1308	448	1374	179	64	3373	52.06	47.94
NT			20	57	193	270	0.00	100.00
OTHER					4	4	0.00	100.00
QLD	610	169	737	263	238	2017	38.62	61.38
SA	182	22	546	183	239	1172	17.41	82.59
TAS	111		544	76	27	758	14.64	85.36
VIC	1418	168	1024	66		2676	59.27	40.73
WA	275	105	413	364	449	1606	23.66	76.34
Total	3910	924	4659	1188	1214	11894	40.64	59.37

This table presents an alternate exploration of ARIA based on DHAC provided data. As for Table 2, the headings are A - Accessible; HA - Highly Accessible; MA - Moderately Accessible, R - Remote; and VR - Very Remote

Table 4 – Alternate ARIA table based on 11278 locations (sourced from DHAC website)

State	A	HA	MA	R	VR	Grand Total	% MA to VR	%HA to A
ACT		18				18	0.00	100.00
NSW	1291	1322	404	100	52	3169	17.54	82.46
NT	3	1	28	47	151	230	98.26	1.74
QLD	420	551	539	182	226	1918	49.37	50.63
SA	364	163	299	124	180	1130	53.36	46.64
TAS	429	114	143	5	27	718	24.37	75.63
VIC	935	1378	316	7		2636	12.25	87.75
WA	285	288	332	244	310	1459	60.73	39.27
Total	3727	3835	2061	709	946	11278	32.95	67.05

Note: Data in the above tables are based on RRMA, Aria and ASGC values obtained from the former Department of Health and Aged Care, the HIC and GISCA.

Table 5 - Current RRMA 4 & 5 locations that would be ineligible under ARIA if Highly Accessible locations were excluded (ARIA score < 1.84)

TownName	RRMA4	RRMA5	No. of Doctors
ALLORA		1	1
BEAUDESERT		20	20
BEERWAH		6	6
BUDDINA	12		12
CABARLAH		1	1
CALOUNDRA	50		50
CANUNGRA		6	6
CLIFTON		1	1
COORAN	1		1
COOROY	13		13
CROWS NEST		4	4
DALBY		16	16
ESK		2	2
EUMUNDI		2	2
FERNVALE		1	1
GATTON		12	12
GLADSTONE	39		39
GLASS HOUSE MOUNTAINS		3	3
GYMPIE	37		37
HIGHFIELDS		2	2
IMBIL		1	1
KILCOY		2	2
LAIDLEY		8	8
LANDSBOROUGH		8	8
LOWOOD		6	6
MALENY		11	11
MAPLETON		5	5
MARYBOROUGH	31		31
MINYAMA	8		8
MOFFAT BEACH	1		1
MONTVILLE		2	2
NOOSA HEADS	13		13
NOOSAVILLE	17		17
NORTH TAMBORINE		7	7
OAKEY		7	7
PEREGIAN BEACH	2		2
PITTSWORTH		3	3
POMONA	4		4
PURGA		5	5
ROSEWOOD		3	3
SUNRISE BEACH	2		2
TEWANTIN	11		11
WARANA	6		6
WARWICK	17		17
WITHCOTT		2	2
WOODFORD		3	3
YANDINA		3	3
Grand Total	264	153	417

Gains - estimated approx 450 to 500 docs

Bundaberg	100
Mackay	100
Townsville	150
Cairns	120

Table 6 - Current RRMA 4 & 5 locations that would be ineligible under ASGC if Major Cities and Inner Regional locations were excluded (ARIA+ score < 2.4)

TownName	RRMA4	RRMA5	No of Doctors
ALLORA		1	1
BEAUDESERT		20	20
BEERWAH		6	6
BOONAH		8	8
BOYNE ISLAND		6	6
BUDDINA	12		12
CABARLAH		1	1
CALOUNDRA	50		50
CANUNGRA		6	6
CHILDERS		4	4
CLIFTON		1	1
COORAN	1		1
COOROY	13		13
CROWS NEST		4	4
CURRIMUNDI	3		3
DALBY		16	16
EMU PARK		5	5
ESK		2	2
EUMUNDI		2	2
FERNVALE		1	1
GATTON		12	12
GLADSTONE	39		39
GLASS HOUSE MOUNTAINS		3	3
GRACEMERE		3	3
GYMPIE	37		37
HERVEY BAY	74		74
HIGHFIELDS		2	2
IMBIL		1	1
KILCOY		2	2
KINGAROY		14	14
LAIDLEY		8	8
LANDSBOROUGH		8	8
LOWOOD		6	6
MALENY		11	11
MAPLETON		5	5
MARYBOROUGH	31		31
MILLMERRAN		2	2
MOFFAT BEACH	1		1
MOUNT MORGAN		2	2
NANANGO		5	5
NOOSA HEADS	13		13
NOOSAVILLE	17		17
NORTH TAMBORINE		7	7
OAKEY		7	7
PEREGIAN BEACH	2		2
PITTSWORTH		3	3
POINT VERNON	1		1
POMONA	4		4
PURGA		5	5
ROSEWOOD		3	3
TANNUM SANDS		2	2
TEWANTIN	11		11
TIN CAN BAY		5	5
WARANA	6		6
WARWICK	17		17
WITHCOTT		2	2
WOODFORD		3	3
WURTULLA	5		5
YANDINA		3	3
YARRAMAN		1	1
YEPPOON		19	19
Grand Total	337	227	564

Gains - approx 270 docs

Townsville 150

Cairns 120

Table 7 – Correlation between RRMA, ARIA and ARIA Plus values

		RRMA	ARIA	Aria Plus
RRMA	Pearson Correlation	1	0.719	0.698
	Sig. (2-tailed)		0.000	0.000
	N	2,278	2,213	2,111
ARIA	Pearson Correlation	0.719	1	0.978
	Sig. (2-tailed)	0.000		0.000
	N	2,213	2,213	2,107
Aria Plus	Pearson Correlation	0.698	0.978	1
	Sig. (2-tailed)	0.000	0.000	
	N	2,111	2,107	2,111

**. Correlation is significant at the 0.01 level (2-tailed).

51.70% Variance explained Aria/RRMA correlation

48.72% Variance explained Aria Plus/RRMA correlation

95.73% Variance explained Aria/Aria plus correlation

Note: Data provided in Tables 5 and 6 are based on information maintained by Health Workforce Queensland that incorporate RRMA, Aria and ASGC values for locations.