Adding the Modified Monash Model variable for Remoteness classification

David Fitzgerald,   September 2016

ALSWH Area Classifications

In 2016 the ALSWH surveys decided to introduce the Modified Monash Model as an alternative to the ARIA+ variable for a remoteness or area of residence classification.

The ARIA+ variable developed from the Australian Bureau of Statistics's remoteness classification system, the Australian Statistical Geography Standard - Remoteness Areas (ASGS-RA). This system used the latest residential population data from the 2011 Census to determine five remoteness categories.

Why a new area classification?

The ALSWH study sample from 1996 was selected from three area zones - urban, rural and remote – with women from rural and remote areas being selected in twice the proportions of the Australian population as those living in these areas.   Therefore area classification has always been a key co-variate in any analysis of the ALSWH data. The ALSWH data has included various area classifications such as RRMA (Rural, Remote, and Metropolitan Areas) and ARIA+, which is from the ASGS-RA (2011) and earlier from the ASGC-RA (2006). The ARIA+ is an index of accessibility/remoteness based on the distance to the nearest service centre.

Regarding its shortcomings the Department of Health reports that

> There has been much criticism from rural doctors and rural communities that the ASGC-RA (2006) system implemented in 2010, which is used to determine eligibility and incentives under a range of health workforce programs for doctors working and training in rural areas, was creating perverse incentives for doctors to move to large, coastal towns, and did not recognise the challenges of recruiting doctors to small rural towns.
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> For example, doctors would receive the same incentives to move to Townsville, a coastal town with a population of approximately 172,000, as they did to move to Charters Towers, an inland town with a population of approximately 8,000.

Regarding the Modified Monash Model, MMM, the Department of Health reports that

> The Modified Monash model was developed by eminent rural academics at Monash University and was modified following consultation with key stakeholders. It is a consistent and well-understood system supported by the best available evidence.

There are 7 MMM categories which are shown in Table 1

Table 1 Modified Monash Categories, note that ASGS-RA is equivalent to ARIA+

Modified Monash Category	Inclusions	Unofficial Description (ALSWH)

MM 1	All areas categorised ASGS-RA1.	Major City
MM 2	Areas categorised ASGS-RA 2 and ASGS-RA 3 that are in, or within 20km road distance, of a town with population >50,000.	Large Regional
MM 3	Areas categorised ASGS-RA 2 and ASGS-RA 3 that are not in MM 2 and are in, or within 15km road distance, of a town with population between 15,000 and 50,000.	Medium Large Regional
MM 4	Areas categorised ASGS-RA 2 and ASGS-RA 3 that are not in MM 2 or MM 3, and are in, or within 10km road distance, of a town with population between 5,000 and 15,000.	Medium Regional
MM 5	All other areas in ASGS-RA 2 and 3.	Small Regional
MM 6	All areas categorised ASGS-RA 4 that are not on a populated island that is separated from the mainland in the ABS geography and is more than 5km offshore.	Remote
MM 7	All other areas – that being ASGS-RA 5 and areas on a populated island that is separated from the mainland in the ABS geography and is more than 5km offshore.	Very Remote

ALSWH Datasets and Remoteness Variables

The ARIA+ variable will still be available in the ALSWH data. The MMM classification will be used in 2016 and all future surveys. It will also be retrospectively added to previous surveys back to 2006. The year 2006 year was decided because it is the date of the census before 2011 which was used in the calculation the MMM.

MMM Estimation from postcode

The MMM will be initially estimated from the respondents' post codes because this is a quick and reasonably reliable method. Going forward the MMM values will be geo-coded on the respondents' addresses and this will be a very reliable measurement. At the time of writing we do not have any geo-coded MMM values from respondents' addresses but we do have estimated MMM values from postcodes on the survey data going back to 2006 using the methods described as follows.

The Department of Health provided a file with the MMM value for each Statistical Area (SA1). A postcode and MMM concordance file was created from this file and also the connection between Statistical Area values and postcodes. This determines an 'average' MMM value for each postcode. The resulting file can and has been used to estimate an MMM value for each ALSWH respondent based on her postcode. This estimation will be used for those surveys after 2006 until a time that the geo-coding can more accurately calculate MMM.

References

Australian Institute of Wealth and Welfare

http://www.aihw.gov.au/rural-health-rrma-classification/

Department of Health

http://www.doctorconnect.gov.au/internet/otd/publishing.nsf/Content/Classification-changes