Regional, Rural and Remote GP Workforce Trends:
Developing evidence-based health workforce policy
June 2014
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This report is written for the Australian Department of Health, June 2014.
1. **KEY POLICY MESSAGES**

**Context**

Obtaining accurate and detailed data about GPs working in regional, rural and remote Australia and their total service provision (including non-billable and non-Medicare billable work) is a vital component of evidence-based healthcare needs assessment and planning.

While a number of high-quality sources exist for the national workforce overall, data on the rural and remote GP labour force lacks some key insights, particularly in relation to the broader scope of practice of these doctors.

The Rural Workforce Agency Network (the Network) collects, maintains and annually updates a Minimum Data Set (MDS) on the regional, rural and remote GP workforce.

The Network’s MDS data demonstrate that, in recent years, the number of GPs for Australians living in regional, rural and remote areas has improved significantly, highlighting the progress being made by policy interventions. However, counteracting this growth in absolute GP numbers are a number of trends which are impacting on the level and type of service provision by regional, rural and remote GPs. Hence, an increase in the number of GP does not necessarily equate to a commensurate increase in access or service provision.

**Key Policy Messages**

Utilising the Network’s MDS data, a number of key workforce trends are highlighted with the following policy messages:

- GPs overall are reducing their working hours (in particular male GPs). More females (who work fewer hours on average) are also joining the workforce. These trends highlight that a greater number of GPs will be required in the future to provide equivalent levels of service.

  - To counter this, concurrent initiatives to boost workforce capacity need to be considered such as more flexible working hours and job-sharing arrangements to encourage females, older GPs and those wishing to reduce their working hours to remain in the workforce.
• 1 in 3 GPs in regional, rural and remote areas are moving towards retirement over the next 5 to 10 years. Suitable succession planning needs to commence now to ensure continued service levels, particularly in those communities with only one or two doctors.

• The length of time that GPs remain in their practice declines with increasing remoteness – those working in regional areas remain in their current practice an average of 8.5 years compared with 5.3 years in remote Australia.

  ▪ These statistics facilitate workforce planning, enabling
    1) providers (such as practice owners and state government health services) to impute realistic length of stay timeframes; and
    2) policy makers to refine the scaling of attraction and retention strategies and guide lengths of service required in ‘return of service’ obligations for bonded GPs

• The proportion of GPs practising procedural medicine has declined from 13.3% in 2010 to 10.6% in 2013. A number of initiatives, such as the development of Rural Generalist Pathways in some states, have been implemented to address this decline and it will be important to continue to monitor this in the coming 2 to 5 years.

The trends detailed throughout this paper highlight that whilst the increase in overall GP numbers is encouraging, it is important to look beyond the numbers at the workforce trends impacting on access levels and service provision ‘on the ground’.
2. THE ROLE OF ACCURATE WORKFORCE DATA IN EVIDENCE-BASED PLANNING

2.1 Background Context

Many developing and developed countries grapple with geographical imbalances in the distribution of their health workforce. Globally, around 50% of the world’s population live outside of urban centres, however only 38% of the total nursing workforce and less than 25% of the total physician labour force work in these areas.¹ As a geographically large country with a relatively small population, Australia is no exception in facing issues surrounding equitable access to health services.²³

Poorer access to quality healthcare providers has been cited as one of the primary causes of health inequity and poorer health outcomes.⁴ In Australia for example:

- life expectancy is up to 7 years less in rural and remote areas than in cities⁵
- survival rates of Australians diagnosed with cancer decrease with increased rurality⁶
- suicide rates in rural and remote areas are significantly higher than in cities⁷

In order to effectively and efficiently target programs aimed at redressing health outcome imbalances for Australians living in regional, rural and remote areas, it is vital that evidence-based community needs assessments are conducted. Such assessments need to consider issues such as:

- the demographic and socio-economic profile of the community;
- the health status of the community;
- the geographic environment and location of the community;
- social determinants of the health of the community such as housing, employment and education; and
- the existing health services to the community – including primary, secondary and tertiary care.

⁷ Ibid.
Assessing current health workforce and service provision is an essential component of a comprehensive needs assessment. As General Practitioners (GPs) are the cornerstone of primary healthcare delivery in Australia, effective needs-based workforce planning requires a review of existing service providers in the community of interest. Typically, this is then compared with other similar communities, or compared to national statistics on a per capita basis.

2.2 Current Regional, Rural and Remote GP Workforce Data

In Australia, there are three main sources used to obtain data regarding the number of GPs in the workforce:

- Australian Bureau of Statistics (ABS) census data
- Medicare data
- Australian Institute of Health and Welfare Medical (AIHW) Workforce series data

There is however variance in the number of GPs reported in the workforce according to which of these sources is utilised (see box below).

![Number of GPs in Australia](chart)

There is variance in the number of GPs in the workforce according to the data source.

Source: AIHW,8 Medicare,9 ABS10

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There are a number of valid methodological reasons why these different data sources yield different numbers,\(^{11}\) for example:

- the time at which data is collected can vary;
- definitions of what is being collected can vary (for example, how a ‘GP’ is defined); and
- differences in how the data is collected (for example, the ABS data is self-reported - in the 2001 census more than 70,000 Australians identified their religion as Jedi Knight.\(^{12}\)).

### 2.3 Why Regional, Rural and Remote GP Data is Different

Accurately counting the number of GPs working in rural and remote Australia is particularly problematic due to the nature of rural GP work and alternative models of care utilised ‘in the bush’. It is not uncommon for regional, rural and remote GPs to work at a number of different practice locations. For example, a GP may work alternate weeks between inner regional Mackay in Queensland and a satellite practice in outer regional Moranbah – providing a 0.5 full-time equivalent service in two very different communities.

Medicare provides relatively detailed data on GP numbers in terms of head count, full-time working equivalents and number of services provided. However, GPs in rural and remote areas undertake a variety of work which is not billed to Medicare – for example Visiting Medical Officer rights at local regional hospitals (often paid for by State health departments). In addition, compared to their urban counterparts, rural and remote GPs are more likely to spend time:

- on-call;
- teaching or supervising medical students or registrars; and
- travelling between their principal practice and other primary healthcare service locations.

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\(^{11}\) For a detailed discussion of this subject, refer to: National Rural Health Alliance. 2013. *How many doctors are there in rural Australia?* NRHA: Canberra.

Medicare data thus only captures one component of the work undertaken by the regional, rural and remote GP workforce.

AIHW undertakes an annual Labour Force Survey which achieves a very high response rate. The report produced by AIHW from this data is regarded by many as providing the most accurate picture of the rural and remote workforce.

In relation to GPs, the AIHW Labour Force Survey collects:

- total hours worked (including clinical and non-clinical)
- principal role
- work setting of main job
- years worked in medicine in Australia
- years intend to remain in the medical workforce

Whilst the AIHW data does provide an accurate estimate on the size of the rural and remote GP workforce (as measured by ‘head count’), it provides limited additional information. Due to the distinct nature of the rural and remote GP workforce, there is a need for more detailed data, particularly in relation to:

- a breakdown of the hours worked in clinical and specific types of non-clinical work (such as teaching, travelling to other primary care work locations, on-call availability)
- models of service provision (eg resident GP, hospital-based GP, fly-in fly-out)
- procedural skills possessed by the GP which add to the total picture of service provision in a particular location (for example, operative surgical or obstetrics skills)
- length of stay in current practice

### 2.4 Rural Workforce Agency Network Data

These official sources of data are a valuable asset in assessing workforce availability. However to address the capacity of the rural and remote GP workforce, other sources are required.

For more than a decade, Rural Workforce Agencies (RWAs) in each state and the Northern Territory have been contracted by the Department of Health to collect a Minimum Data Set (MDS) on the GP workforce in their respective jurisdictions. This data can shed additional light on the real level of GP service available in remote, rural and regional communities,
2.5 GPs in regional, rural and remote Australia

Using data from the current Network MDS, the growth in the rural and remote GP workforce over the past 4 years is summarised in the chart below. Overall, there has been a growth of 23% in the GP workforce. This is significantly in excess of the 3.5% population growth in rural and remote Australia over the same period.

Over a similar 4 year period (2009-12) there was a growth of 10% in the GP workforce in major cities (and a population growth of 5.7%).

Note that the total figure of 7,975 GPs working regional, rural and remote Australia in 2012 is comparable to the figure of 7,779 reported by AIHW for that year\textsuperscript{16}, taking into account different cut-off dates for reporting and different data collection methodologies.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{chart.png}
\caption{GPs in the rural and remote workforce - 2012}
\end{figure}

\textsuperscript{13} Australian Bureau of Statistics. 2014. \textit{Regional population growth, Australia}. Cat. No. 3218.0. Canberra: ABS
\textsuperscript{14} Australian Government Department of Health. 2012. \textit{Op cit.}
\textsuperscript{15} Australian Bureau of Statistics. 2014. \textit{Op cit.}
\textsuperscript{16} Australian Institute of Health and Welfare. 2014. \textit{Op cit.}
These data demonstrate that in recent years, access to GPs for Australians living in regional, rural and remote areas has improved significantly, highlighting the progress being made by policy interventions. However, moderating this growth in absolute GP numbers are a number of trends which are impacting on the level and type of service provision by regional, rural and remote GPs. Hence, an increase in the number of GPs does not necessarily equate to a commensurate increase in access or service provision.

The remainder of this paper highlights some of these broad workforce trends identified through the Network’s MDS collection and discusses relevant policy implications.
3. GP WORKFORCE TRENDS IDENTIFIED THROUGH THE NETWORK’S MDS

3.1 More female GPs

An increasing number of female GPs are entering the regional, rural and remote GP workforce. Since 2010, the proportion of female GPs has increased from 35% to 39%. Similar trends are apparent in the national medical workforce overall – in 2009 females comprised 36% of the Australian medical workforce – up from 29% in 1999.17

As shown in the chart below, the proportion of female GPs is similar across all Remoteness Areas18, although slightly suppressed when compared to major cities.

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18 Australian Standard Geographic Classification Remoteness Area (ASGC-RA). ASGC-RA is a geographic classification system that was developed in 2001 by the Australian Bureau of Statistics (ABS), as a statistical geography structure which allows quantitative comparisons between 'city' and 'country' Australia. The RA categories are - RA1: Major Cities of Australia; RA2: Inner Regional Australia; RA3: Outer Regional Australia; RA4: Remote Australia; and RA5: Very Remote Australia.
Looking at 2012 (the most recent year for which AIHW data is available for comparison), 42% of GPs in major cities were female, compared with 38% across all regional, rural and remote locations.

For the 5 years from 2008 to 2012, the proportion of female domestic medical students has ranged from 52% to 55%. Hence, it can be expected that the numbers of female GPs in the workforce will continue to rise in the short to medium term.

**POLICY IMPLICATIONS**

- More female GPs are entering the workforce and this growth is likely to continue for some time.
- Female GPs in regional, rural and remote Australia report working on average 7.8 hours per week less than males.
- Overall, around 2 in 5 female GPs (41%) work part-time (defined as less than 35 hours per week) compared with around 1 in 5 male GPs (19%).
- Future workforce development needs to plan for the increased numbers of females entering the GP workforce (ie more GPs will be required for full-time equivalent service provision).
- The development of more flexible working hours and employment models (eg job-sharing, part-time positions) will also be required.

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3.2 Age of the workforce

The mean average age of a GP working in regional, rural or remote Australia in 2013 was 49.7 years (unchanged from the mean average age in 2010) and 34% were aged 55+ years.

By comparison, the mean age of GPs working in major cities in Australia in 2012 was 51.7 years and 41% were aged 55+ years. The younger mean age of GPs in rural and remote Australia is likely due to the higher proportion of International Medical Graduates working in these areas compared with major cities. It should also be noted that there are communities in remote, regional and rural Australia where the average age of GPs is higher than this national average.

More broadly, there is also some variance in age according to level of remoteness, with the mean age of GPs declining with increasing remoteness.

### Mean age of GPs in 2013 by Remoteness Area

<table>
<thead>
<tr>
<th>Remoteness Area</th>
<th>Mean Age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner regional</td>
<td>50.2</td>
</tr>
<tr>
<td>Outer regional</td>
<td>49.0</td>
</tr>
<tr>
<td>Remote/very remote</td>
<td>47.9</td>
</tr>
<tr>
<td>Major cities</td>
<td>51.7</td>
</tr>
</tbody>
</table>

*The mean age of GPs declines with increasing remoteness.*

### Policy Implications

- 34% of GPs working in rural and remote Australia are aged 55+ years.
- With these doctors moving towards retirement over the next 5-10 years, it is important to ensure that they have suitable succession planning arrangements in place.
- This is particularly important in situations where these GPs may be one of only a few (or the only) primary healthcare professional in the community.

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3.3 Changing work hours

Through the MDS, detailed data is collected on the hours worked by rural and remote GPs. GPs working outside of urban areas often undertake a broader scope of activities and this is captured through recording the hours spent by GPs on each of the following:

- routine clinical work including administration
- hospital work
- teaching and supervising
- work as a GP representative or delegate
- work in health research
- travelling time between principal practice and other primary care work locations
- other GP related activities (e.g., studying, professional development)
- hours available on-call
- hours worked on-call

3.3.1 Mean hours worked

On average, rural and remote GPs worked a total of 41.0 hours per week in 2013. Hours involved in clinical work represented 86% of this total.

<table>
<thead>
<tr>
<th>Mean hours worked per week in 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GPs in rural and remote Australia</strong></td>
</tr>
<tr>
<td>Rural &amp; remote</td>
</tr>
<tr>
<td>Clinical 34.4 hours</td>
</tr>
<tr>
<td>Other 6.6 hours</td>
</tr>
<tr>
<td>41.0 hours</td>
</tr>
</tbody>
</table>

3.3.2 Mean hours worked by remoteness

The mean hours worked by GPs increases with remoteness.

In part, this explains the increase in Full-Time Equivalent GPs reported by the AIHW in their latest Medical Workforce report. While there has been an increase in the number of GPs working in remote and very remote Australia, given the longer hours worked by these doctors, the FTE rate increases disproportionately compared to less remote areas. To put it another way, on average every GP working in remote areas of Australia is working the equivalent of an additional 1 day each and every week compared to their metropolitan counterparts.

3.3.3 GP working hours are declining

Across all areas of regional, rural and remote Australia, the hours worked by GPs are declining. The declines evident over the relatively short timeframe of 2010-2013 are modest – GPs are working an average of 1.3 hours less per week in 2013 than they were 4 years previously. This trend however is consistent with other data measured over longer time frames. From the decade 1999-2009, the mean hours worked by all Australian medical practitioners declined from 45.6 to 42.2 hours per week.

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In the 4 years from 2010 to 2013, the mean weekly hours worked by regional, rural and remote GPs declined by 1.3 hours. This equates to around 250 fewer full-time equivalent GPs.

In part, the decline in hours worked can be explained by the increased number of female GPs entering the workforce. As was noted earlier, females GPs are significantly more likely to be working part-time compared with their male counterparts.

Hence, the overall decline in working hours is not entirely explained by the increasing numbers of female GPs. The reasons for this reduced workforce effort are multifactorial and include other issues such as changing societal attitudes towards work-life balance.
Irrespective of the cause, the implications are clear - in the absence of decreased demand or increased workforce productivity, greater numbers of GPs will be required in the future to provide the same level of services.

**POLICY IMPLICATIONS**

- GPs in regional, rural and remote Australia work more hours per week (on average) than those in major cities which ‘inflates’ the number of GPs in an area when reviewed on a Full-Time Equivalent basis.
- Despite working longer hours overall however, regional, rural and remote GPs’ hours are declining over time (along with urban GPs’ hours).
- This decline is not entirely due to increased numbers of female GPs entering the workforce (who work fewer hours than male GPs on average). In fact, over the past 4 years the mean weekly hours worked by female GPs has increased slightly.
- Nevertheless, at current rates of demand and workforce productivity, hundreds more GPs will be required in rural and remote Australia simply to maintain the level of services being provided today.
3.4 Length of time in current practice

Over the past four years there has been a decline in the mean length of time that GPs have been in their current practice. In 2010, GPs (excluding registrars) had been in their current practice a mean of 9.3 years. Four years later this had declined 11% to 8.3 years.

Similar trends were identified in a recent study which analysed a longitudinal subset of MDS data for New South Wales (NSW). Undertaking sophisticated multivariate survival analysis modelling, the study found GPs practising in small, remote locations were over 2.5 times more likely to leave over a 10 year period compared to those working in inner regional NSW.

The authors note these findings provide empirical evidence to:

- refine the scaling (by geographical remoteness) of the attraction and retention incentives provided by the Australian government to GPs and other health professionals;
- better target retention strategies to GPs in smaller towns; and
- guide the relative lengths of service required in ‘return of service obligations’ for GPs bonded to work in rural and remote areas (for example in return for financial incentives during undergraduate studies).

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MDS data highlights that overall, GPs in regional areas remain in their current practice around 8 to 9 years on average compared with around 5 years for those working remote locations.

These statistics facilitate workforce planning, enabling providers to impute realistic length of stay timeframes into forecasting models.

The data also provides evidence to underpin more targeted retention incentives and strategies and guide lengths of service in ‘return of service obligations’ for bonded GPs.

**POLICY IMPLICATIONS**

- MDS data highlights that overall, GPs in regional areas remain in their current practice around 8 to 9 years on average compared with around 5 years for those working remote locations.
- These statistics facilitate workforce planning, enabling providers to impute realistic length of stay timeframes into forecasting models.
- The data also provides evidence to underpin more targeted retention incentives and strategies and guide lengths of service in ‘return of service obligations’ for bonded GPs.
3.5 GP Proceduralists

In rural areas, GPs are often required to manage acute and chronic presentations without the specialist support that is available to their urban counterparts. As such, GPs may undertake additional training to gain expertise and recognition in a particular procedural skill such as surgery or obstetrics. GP proceduralists have been defined as “a highly trained cohort of GPs that have historically provided anaesthetic, obstetric, surgical and other routine and emergency procedural interventions for patients in local communities.”

The Network’s MDS collects information regarding how many GPs regularly practise a range of procedural and other skills such as anaesthetics, obstetrics, surgery, and emergency care. The three ‘core’ procedural skills are defined as:

- General anaesthetics;
- Operative surgery; and
- Normal delivery obstetrics

3.5.1 Greater numbers of GP proceduralists in more remote areas

The proportion of GPs who regularly practise one or more of these three core procedural skills increases with Remoteness Area.

This illustrates the role of the GP proceduralist in more remote areas, with a positive correlation between the number of GP proceduralists and increasing rurality.


3.5.2 Decline of GP proceduralists in regional, rural and remote areas

Since 2010 there has been a decline in the proportion of GPs practising core procedural skills. This decline however has been more marked in regional areas. In remote areas, there has in fact been an increase in the number of GPs performing operative surgery, although this has been offset by a decline in those performing anaesthetics and in particular, obstetrics.

Overall, the number of GPs practising one or more of the three core procedural skills has declined from 13.3% in 2010 to 10.6% in 2013.

The reasons for this decline are multi-faceted and complex. For example, the decline in GPs practising surgical interventions has been attributed to:28

- a lack of postgraduate procedural training opportunities;
- rising professional indemnity premiums;
- changes to hospital accreditation policies; and
- increasing numbers of surgical specialists.

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A recent study undertaken by Health Workforce Australia in conjunction with Rural Workforce Agency Victoria reviewed the GP proceduralist workforce for maternity services in regional and rural Victoria.\(^{29}\) The study listed a wide range of factors as being behind the decline of GP obstetric proceduralists including:

- the downgrading and/or consolidation of clinical infrastructure in many regional and rural locations;
- a perceived lack of recognition for GP proceduralists (with GPs perceiving that patients see their skills as inferior to those of a specialist);
- long working hours and the related impact on lifestyle;
- the lack of opportunity to up-skill or obtain adequate levels of practice; and
- changing models of care.

The development of a Rural Generalist Pathway in some states has been designed to tackle the decline in the number of GP proceduralists in rural and remote Australia.\(^{30}\) Data from the MDS highlights the importance of these professionals to remote Australia in particular, and underscores the need to pursue initiatives to tackle these declines.

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**POLICY IMPLICATIONS**

- 1 in 5 GPs in remote and very remote Australia regularly practise at least one procedural skill.
- The number of GPs practising procedural medicine has declined in recent years, particularly in outer regional and remote areas.
- A number of initiatives have been implemented to address this decline.
- It will be important to continue to support these programs and monitor trends in the rural and remote GP proceduralist workforce through future Network MDS data collections.

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\(^{30}\) For example, Queensland Health’s Rural Generalist Pathway and the Victorian Government Department of Health’s General Practitioner – Rural Generalist Program.
4. CONCLUSIONS AND RECOMMENDATIONS

Obtaining accurate and detailed data about GPs working in regional, rural and remote Australia and their total service provision (including non-billable and non-Medicare billable work) is a vital component of evidence-based healthcare needs assessment and planning. While a number of high-quality sources exist for the national workforce overall, data on the rural and remote GP labour force lacks some key insights, particularly in relation to the broader scope of practice of these doctors.

The Rural Workforce Agency Network collects, maintains and annually updates a Minimum Data Set on the regional, rural and remote GP workforce. This paper has highlighted a number of broad trends from the Network’s MDS and their policy implications, illustrating the value of quality data collection in developing evidence-based workforce policy.

In future, the Network plans to expand even further the information collected through the MDS and develop processes to allow the dataset to be collated nationally and tracked over time. This new and larger dataset will provide a greater understanding of the distribution of the health workforce across different service locations.

In time, it is hoped that this expanded collection will evolve to become a ‘healthcare service provision’ dataset rather than a ‘GP’ or ‘workforce’ dataset. Unique identifiers will be assigned to individuals within each RWA’s dataset, enabling longitudinal tracking of individual healthcare professionals in a de-identified way – both over time and across jurisdictions, whilst ensuring privacy principles are complied with at all times.

This will represent the most detailed longitudinal data-set on the regional, rural and remote primary healthcare workforce. The continued funding and support of this collaborative initiative is recommended to enable evidence-based future workforce planning and assessment of program initiatives.