Sustaining healthy rural communities through viable rural medical practices

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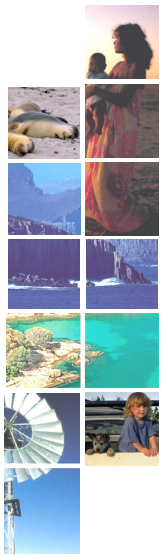
INTRODUCTION AND BACKGROUND



Non-metropolitan Australia is characterised by an enormous diversity of rural and remote communities. This diversity is a cause for celebration as it enhances rural opportunities and lifestyles. On the other hand, however, this rural "mosaic" includes communities characterised by less-than-optimal health status and levels of well-being, and consequently less-than-optimal "life chances" for their residents.

The importance of providing appropriate, sustainable health services to meet the health needs of rural and remote inhabitants should not be underestimated. Nowhere is this more so than in the case of rural doctors, where medical practitioners play such a pivotal role in the provision of health care to rural Australians and to the sustainability of their communities (Commonwealth Department of Health and Aged Care, 2000). Most Australians see the general practitioner as the "hub in the wheel" of primary care, with more than 80% of the population (and more than 90% of women) visiting a general practitioner at least once a year. In rural communities, the doctor represents the preferred provider of health care (Humphreys & Weinand, 1991; Stratigos, 2002)

Unfortunately many of Australia's rural and remote communities are finding it increasingly difficult to recruit and retain doctors (Commonwealth Department of Health and Family Services, 1998), with the result that problems associated with accessing medical care are exacerbated. Moreover, this rural medical shortage acts as a deterrent to attracting new immigrants to rural communities and even retaining existing families who are increasingly concerned that their health care needs cannot be met locally.

Given the current rural medical workforce shortage, rural practitioners experience long working hours, constant on-call, lack of support and access to specialist services, and lack of locum relief at a high cost to family life (Humphreys et al., 2002). Significant differences exist between urban and rural practice. For example, GPs in RRMAs 3–7 work an average 52 hour week, compared with an average 45 hour week in city practices (Stratigos, 2002)

As the cornerstone and often only provider, most rural doctors seek to provide a range of medical care that ensures that residents of their community have ready access to the services commonly available, and certainly expected, in major urban centres. The wide range of complex activities undertaken by the rural doctor requires a very high skill

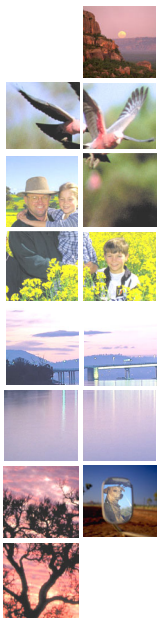
level, often without any significant local support, invariably with the rural doctor assuming full responsibility for the health outcomes of the patient.

Of increasing importance among the many issues that impact upon the recruitment and retention of medical practitioners to rural areas is the inadequate level of remuneration in relation to what general practitioners actually do (Australian Department of Health and Aged Care, 2001). Increasingly rural doctors are frustrated by the fact that current methods of remuneration do not reward adequately for the time, skill and responsibility associated with meeting diverse patient needs in small rural communities where few alternative health care services are available.

According to Strasser (1995), rural GPs provide a wider range of services and carry a higher level of clinical responsibility. Unfortunately to date, little systematic empirical research has been undertaken into the complexity of activities undertaken by rural doctors or how this varies according to location. This short paper reports on one specific but very important aspect of a major national rural general practice study that was undertaken in 2002.

The aim of this project was to identify how rural and remote diversity is reflected in the nature and complexity of practice activities, and to determine how different aspects of "rurality" and geographical location impact upon the costs associated with delivering medical care and viability of rural health services. This project, sponsored by the Department of Health and Ageing and auspiced by the Rural Doctors Association of Australia in association with Monash University School of Rural Health Bendigo, represents the first step towards implementing measures required for viable rural practice in the wide diversity of rural and remote communities.

METHODOLOGY



A census survey of all general practitioners in private practice currently practising outside of metropolitan areas was undertaken in July 2002. Following clearance from the Statistical Clearing House, the Health Insurance Commission provided a file of 4406 GPs who performed at least 375 non-referred services for the January–March quarter 2002. These covered services provided to 7713 locations from 1741 unique practices. Ethics approval was obtained from the Monash University Standing Committee on Ethics in Research Involving Humans.

The questionnaire survey collected information relating to the nature and complexity of practice activities, existing practice structures and organisational arrangements, indicators of the costs associated with practice activities, measures required to improve practice viability and demographic information.

This paper reports only the findings relating to the issue of practice complexity. Five sentinel questions relating to the complexity of activities undertaken by rural and remote GPs were compiled using a Delphi process with general practitioners:

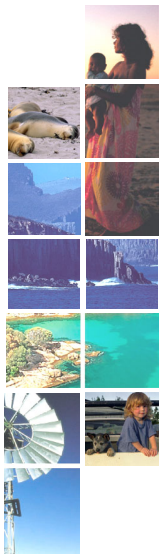
- *Treatment of myocardial infarction, ranging from initiating emergency treatment, continuation beyond emergency treatment including the administration of streptokinase, to management as an in-patient.* (This question was designed to ascertain discretionary emergency treatment provided by the GP to a high level).

- *Administration of systemic cytotoxic drugs.* (This question probed discretionary non-emergency treatment that provided a major benefit to the patient if available at the local level, and provided an indicator of both confidence and competence of the GP).

- *Performing a forensic examination on a sexual assault victim at the request of the police.* (This question was designed to provide some indication of the expanded skill base of the GP).

- *Discharge planning of patients from hospital.* (This question provided a surrogate for the involvement of the GP in the full cycle of patient care, ensuring continuity of care and not simply patient "hand-over").

- *Routine involvement in the stabilisation of injured patients pending retrieval or evacuation.* (This question provided an indication of emergency care).



In order to identify the extent to which the complexity of practice activities varied according to geographical location, the Rural, Remote and Metropolitan (RRMA) Classification was used (DPI & DHSH, 1994). The RRMA classification was developed in 1994 by the Departments of Primary Industry and Energy and Human Services and Health. It provides a seven-scale classification with the express purpose of distinguishing "rural" from "remote" Statistical Local Areas according to a measure of remoteness. Two categories distinguish metropolitan areas — Capital Cities and Other Metropolitan Centres (with a population above 100,000). The five non-metropolitan categories of interest to this study were:

- RRMA 3 category: Large rural centre (population 25 000–99 999)

- RRMA 4 category: Small rural centre (population 10 000–24 999)

- RRMA 5 category: Other rural centre (population <10 000)

- RRMA 6 category: Remote centre (population >5000)

- RRMA 7 category: Other remote centre (population <5000).

Despite its limitations, RRMA provides an appropriate measure of geographical differentiation and still forms the basis for funding several important government programs, such as the Rural Workforce Agencies and the Practice Incentives Program.

Cross-tabulation analysis and significance testing were undertaken using the Statistical Package for Social Sciences (Version 11).

RESULTS

Excluding "ineligible" GPs (due to having retired, left address, extended leave or deceased), 1498 useable responses were returned from the questionnaire survey. These responses comprised RRMA 3, n=265; RRMA 4, n=370; RRMA 5, n=753; RRMA 6, n=45; and RRMA 7, n=65. This represented a response rate of around 35% of practitioners, with 53% of all practices represented by the responses. Seventy one percent of practitioners are in practices from which at least one return was received.

Tables 1–3 indicate the findings for the five measures of the complexity of activities.

Table 1 Percentage of GPs within rural category providing treatment

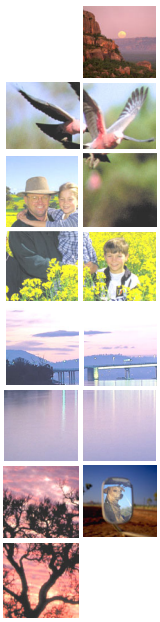
Rural category	Myocardial infarction			
	Initiate emergency treatment	Administer streptokinase if indicated	Manage as in-patient	Provide all 3 levels
Large rural centre (25 000–99 999)	92.8	7.5	12.5	6.8
Small rural centre (10 000–24 999)	88.1	30.0	32.2	25.4
Other rural centre (<10 000)	91.4	64.7	56.2	51.3
Remote centre (>= 5000)	93.3	60.0	53.3	48.9
Other remote area (<5000)	90.8	75.4	44.6	40.0

Table 2 Percentage of GPs within rural category providing treatment

Rural category	Administer systemic cytotoxic drugs	Performed forensic examination on a sexual assault victim at request of police	Stabilisation of injured patients pending retrieval or evacuation
Large rural centre (25 000–99 999)	21.5	15.3	6.1
Small rural centre (10 000–24 999)	31.6	21.2	26.4
Other rural centre (<10 000)	47.1	16.5	63.8
Remote centre (>= 5000)	44.4	42.2	48.9
Other remote area (<5000)	55.4	40.0	87.7

Table 3 Percentage of GPs within rural category providing treatment

Rural category	How often do you co-ordinate discharge management (discharge planning) of patients from hospital?				
	Never	Less than once a week	1–5 times a week	6–10 times a week	More than 10 times a week
Large rural centre (25 000–99 999)	31.0	46.7	21.2	1.1	–
Small rural centre (10 000–24 999)	30.9	35.4	28.2	4.4	1.2
Other rural centre (<10 000)	18.5	25.5	41.4	12.7	1.8
Remote centre (>= 5000)	31.1	31.1	26.7	11.1	–
Other remote area (<5000)	18.8	18.8	45.3	14.1	3.2

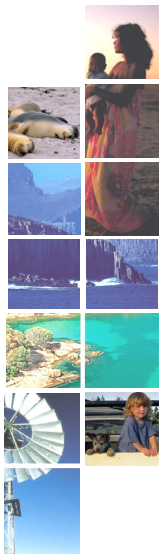


In general, the results show that across all of the complexity measures there is a trend for increasing complexity of service with increasing rurality or remoteness.

In the case of treatment for myocardial infarction, the differences by RRMA across the counts of the numbers of levels of care provided was significant at $p<.001$. Almost all doctors across all rural areas initiate treatment, but those in regional centres are very unlikely to do much more than that. Doctors in the most rural and remote communities (RRMAs 5–7) are the most likely to provide all three levels of care. In the most remote communities (RRMA 7), three-quarters of GPs reported administering streptokinase if indicated.

Differences in the proportion of rural doctors administering systemic cytotoxic drugs, performing a forensic examination on a sexual assault victim at the request of the police, and routine involvement in the stabilisation of injured patients pending retrieval or evacuation by RRMA were significant at p<.001. In the administration of cytotoxic drugs, a clear difference is apparent between the lower rates by doctors in RRMAs 3–4 compared with the rates by RRMA5–7 doctors. Forensic examination on a sexual assault victim is much more common for remote than rural doctors. In terms of the stabilisation of injured patients, the rate of provision increases with increasing rurality. In contrast to the low rate provided by GPs in large regional centres (RRMA 3), almost all remote area (RRMA 7) doctors do provide this service.

Despite some apparent differences, discharge planning did not prove to be such a significant discriminator, with less than 2 percent of the total handling more than 10 discharges per week. The pattern showed similarity between RRMAs 3, 4 and 6 (where the majority of GPs were managing less than one patient per week) compared with GPs in RRMAs 5 and 7 (where the majority of rural doctors were providing this service much more frequently). Clearly, some GPs in some of the larger rural and remote centres have access to alternative hospital patient management.



DISCUSSION

The results reported above provide a clear indication that the nature and complexity of general practice activities differs significantly by geographical location and rurality. Certainly the more rural or remote the doctors, the more likely they are to be regularly engaged in critical emergency treatment employing an expanded skill base. This impacts on workload, pressure and responsibility, vocational satisfaction, the need for professional education and support, and importantly on the costs and remuneration of practice (both economic and social).

The findings have a number of important implications. In terms of programs and measures designed to support and remunerate doctors practising in non-metropolitan locations, a "one-coat-fits-all" approach is inappropriate. Such measures need to take account of the significant differentiation that is evident, particularly the associated costs and types of professional support required by rural doctors. From the rural consumer perspective, it is clear that the wide range of complex services that rural GPs provide to their local communities is very significant in ensuring that they have equitable access to medical services — services which may not otherwise be available without the need to travel long distances to regional centres. Moreover, the value of local provision in terms of patient care and health outcomes should not be underestimated — something which is recognised by the high value placed on rural doctors by rural Australians.

CONCLUSION

This short paper provides comprehensive empirical evidence which demonstrates how the complexity of activities undertaken by rural doctors varies according to location. The findings reported above are only one aspect of a broader study which seeks to identify the requirements for ensuring viable and sustainable rural practices and demonstrate how existing health policies impact upon the viability and

sustainability of health services needed to meet the health needs of diverse rural places.

Viable and sustainable health services enhance the health status and life-chances of community residents and improve the well-being of rural and remote medical practitioners and their families. Currently, difficulties in recruitment and retention, combined with inadequate remuneration to cover the higher costs associated with rural general practice, pose significant threats to the availability of appropriate medical care for many small rural and remote communities. In the absence of strategic interventions to support rural general practice, rural communities are likely to lose critical medical and health care services, in turn leading to a significant reduction in the health status of rural and remote residents and loss of capacity to address the medical and health care needs of those communities.

Clearly the challenge for governments is to develop an integrated rural medical workforce retention strategy which takes account of the complexity of practice activities, provides professional support and remuneration appropriate to skills and responsibilities, and, in the light of previous research (Humphreys *et al*., 2002) enables the doctor to spend a reasonable amount of time away from the practice.

RECOMMENDATION

In order to ensure the provision of viable health care services to rural and remote Australians and the sustainability of their communities, governments need to factor differences relating to the nature and complexity of rural and remote general practice activities into differential measures designed to support and remunerate rural doctors.

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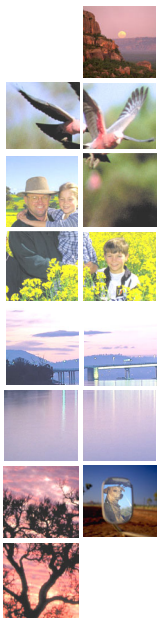

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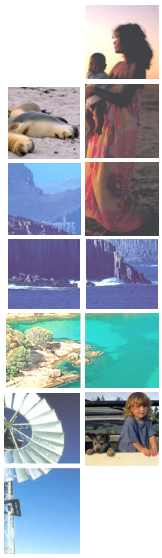
PRESENTERS



David Mildenhall graduated MB, BS from UWA in 1975 and completed further studies in obstetrics, gynaecology, surgery and anaesthetics. He is also a Fellow of the Australian College of Rural and Remote Medicine.

David has been a partner in a group practice in Albany for over 20 years and has executive responsibility for human resources and office administration within the practice. He has procedural interests in anaesthetics, obstetrics, minor gynaecology and GI endoscopy.

Building on a long history of service through Committees and Boards, in recent times David has served as a member of several advisory and review committees including the WA General Practitioner Advisory Council, the WA Centre for Remote and Rural Medicine Advisory Board, the Medical Advisory Committee of the Albany Regional Hospital, the Health Department of WA State Paediatric Policy Development Committee, and the WA Maternal Mortality Committee, to name a few. He has also served as a Director of the Great Southern Division of General Practice and served on several of its sub-committees.

David has been active in professional associations, serving as President of the Rural Doctors Association of WA and is the immediate past National President of the Rural Doctors Association Australia, representing these organisations on a number of State and Federal Committees and reference groups. He is currently Chairing the Research Committee — Viable Models of Rural General Practice, an RDAA auspiced, Federal government funded research project.