

INAUGURAL RURAL & REMOTE HEALTH SCIENTIFIC SYMPOSIUM

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Overview

Prof John Humphreys, Prof of Rural Health Research, Monash University School of Rural Health

Thank you for the opportunity to provide this opening talk at the Inaugural Rural and Remote Health Research Symposium. I feel privileged to be invited to address so many friends and colleagues who are actively engaged in research.

I would like first to acknowledge the traditional owners of the land on which this symposium is being held.

My opening remarks fall into four areas:

- first some brief background to rural health research in Australia
- secondly the Symposium themes
- thirdly the purpose of this symposium, and
- lastly some comments on how research can assist to bring about improvements in the health status and life chances of Australians living in rural and remote communities.

Background to rural health research in Australia

If we view the history of rural and remote health research in Australia, it does not take long to realise that we are in our infancy. The early days were characterised by a few leading health professionals who pioneered some landmark studies—the names Coolican¹ and Kamien² readily spring to mind. Indeed, Max Kamien's *The Dark People of Bourke* and his keynote address at the National Rural Health Conference 10 years ago "Declare the past, diagnose the present, foretell the future: Rural Health for all Australians by 2000"³ are compulsory reading for those of you who have not had the privilege to read them (REFS). These health leaders undertook research on rural health issues with a view to ensuring appropriate policies and programs underpinned by evidence were developed and implemented.

However, rural and remote health research in Australia did not really take off until the 1990s, when a number of events provided an important impetus for bolstering research activity. The

Australian Journal of Rural Health, established under the initial Editorship of Desley Hegney, followed by John Marley and currently James Dunbar, has now become the national and international voice of Australian rural and remote health research. This was later augmented by the *Electronic Journal of Rural and Remote Health* under the Editorship of Paul Worley. Since 1996, University Departments of Rural Health set up in every State have been collectively driving a research program focused on significant rural and remote health issues.^{4,5}

More recently, several rural and remote health textbooks based on invited contributions have been written for students in education and training, practitioners and policy-advisors.^{6,7} (REFS) Audits of research activity also indicate a prolific number of rural health research outputs in a relatively short period of time.^{8,9}

Against this backdrop of research activity a number of key questions emerge.

- How much better is our understanding of rural and remote health issues?
- What difference is this new knowledge making to policies and programs which determine resource allocation and health service planning for inhabitants of rural and remote communities?
- Why isn't rural health research evidence more readily taken up by governments, health authorities, health services and practices?
- How much closer are we to achieving the goal of equitable access to health services that was set out in the first National Rural Health Strategy fifteen years ago?

The symposium themes

Let me turn now to the themes for this symposium and begin with two quotations. The first comes from the report of the Hospitals and Health Services Commission (1976:2):

“Many country people find it difficult to obtain adequate health care. There is a shortage of doctors, dentists and other health personnel, and difficulties in maintaining health facilities in many districts ... even where an adequate range of services is available, access may be impeded by lack of public transport or poor roads...”

The second comes from the letter sent to me by a resident in the Mallee region of north-west Victoria.¹⁰ These were her reflections after keeping a health diary for 16 weeks as part of a study we conducted in the region:

“I feel the need to mention some health issues which have been “festering” in my mind ... Mostly they are things which are intangible and difficult to express, so please bear with me.

...both parents have been quite severely stressed and affected by a number of things. These include the death by motor car accident early this year of a good friend and neighbour (who had children the same age as ours) and serious illness of other friends in the community before their time; serious drought problems affecting our farm and unresolved family farm issues which seem to be overwhelming; ongoing financial difficulties and resultant concerns about financing our children’s education and other opportunities, barely being able to make ends meet now let alone plan for our retirement (which everyone says is so essential); the state of the country’s financial and economic problems and the daunting responsibility of this year’s election; and the continued erosion of services and facilities in country areas.

Added to all this, I am a mother of four young children working full time—with the associated stresses of the work place (which generally boil down to being expected to do too much within the hours allocated), the associated concerns about the effect of not “being there” for my family, and not being able to contribute as much as we would like to the community groups we are involved with (school, football club etc). Due to the very grim outlook of the farming, my husband has also been doing other off farm work whilst still doing the farm work. Everything in our lives seems to be getting more and more complex, difficult, involved, harder to grasp and understand—you should have seen the paperwork we had to do to claim a diesel fuel rebate for the farm, and just look at the information demanded by social security.

So to the question of how to describe my family’s health—generally it’s pretty good, if

you disregard the fact that mum feels a physical, emotional and mental wreck most of the time, and dad feels mildly depressed, worried all the time, and helpless to solve the difficulties confronting him. There is a constant feeling of being overwhelmed, and stretched beyond all reasonable limits.

We have also experienced quite severe cases of “colds & flu”, without treating them properly with the rest and care deserved. Things like sore backs, headaches and gout are simply endured (with a little bit of over-the-counter medication). This is for many reasons—It’s too difficult to get a doctor’s appointment, and there is a conception of wasting the doctors’ time when they are so busy and the problem not serious. There is also a conception that some of these things are just part of life, or are unavoidable, and shouldn’t be given any greater significance.

Being involved with the research has brought home to me most strongly the knowledge that we must always be aware of these problems as potentially serious health issues. It is also obvious that we don’t take care of our health the way we should. I have often bragged about my being here for a long time because of my great genes (all my grandparents have lived, and lived well, beyond 90 years and my parents are fit, both in their 70s). However, I think the pressures we are living with in our lives may well work against those genes—not a happy realisation.”

The four themes that have been set to guide the four sessions of this Symposium provide ample opportunity for us to reflect on the current state of research with respect to the issues raised by both these quotes.

- What is distinctive about health status in rural and remote areas?
- How does rurality and remoteness impact on the determinants of health?
- How do we deliver appropriate and accessible health care relevant to the diverse needs of rural and remote Australians
- How can we translate our knowledge into policies designed to ensure optimal health for non-metropolitan Australians.

The purpose of this symposium

With its focus on non-metropolitan Australia—the enormously diverse 7.5 million square kilometres of

Australia that is home to more than 7 million inhabitants—this Rural and Remote Health Research Symposium is extremely timely. At the present time, Commonwealth, State and Territory governments are seeking solutions that will enable them to respond to a range complex and unmet rural and remote health issues. The recent 2020 Forum, the National Health and Hospitals Reform Commission, and the National Primary Health Care Strategy Group all represent a new era of consultation and marshalling of ideas and input to address key health issues of national significance.

This Symposium brings together leading Australian and International rural and remote health researchers. Over the next three days we have the opportunity to discuss Australia's foremost rural and remote health issues of Australia and set its future research agenda. It provides the opportunity to consider:

- What are we researching and what should we be researching?
- Are we going about research the 'right' way—that is, collaboratively using methodologies that will generate rigorous and credible knowledge, and
- How well our research interfaces with policy and practice

Knowledge linkage and exchange

This issue of knowledge translation is very topical at the present time and warrants considerable attention. To achieve good health for all requires that policies reflect the best available evidence. Linkage and exchange describes the process of knowledge transfer between researchers and policy makers. To be useful for policy makers this research evidence must be timely, accessible and relevant. Given the considerable rural and remote health research that has been undertaken over the past 15 years, it is pertinent to ask why has progress in improving the health outcomes of rural and remote Australians been so slow, something which Max Kamien's paper targets very poignantly.

What do we need to do to ensure that we have an effective linkage and exchange process so that our research can inform the development of policies designed to improve health outcomes in rural and remote communities?

With these thoughts in mind, I would like to suggest that this Symposium could produce several important outcomes:

- A collective resolve to identify and investigate those important and complex rural and remote health issues that are currently poorly understood and for which evidence is lacking.
- Dissemination and advocacy to ensure that our research evidence underpins the policies guiding resource allocation and health service planning designed to bring about improved health outcomes for all non-metropolitan Australians.
- Better ways to embrace early career researchers, practitioners, service providers and policy-advisors with established rural and remote health research programs.

Anyway—enough from me and on with the show!

Biography

John Humphreys is Professor of Rural Health Research in the School of Rural Health at Monash University Bendigo. John is well known for his academic expertise and research on health service provision in rural and remote areas of Australia, rural workforce recruitment and retention, rural health policy and the evaluation of rural health programs. He has undertaken extensive fieldwork throughout rural and remote regions of Queensland, New South Wales and Victoria, and has published widely in books and journals. In addition to his academic career, John has worked in both the Victorian and the Commonwealth Departments of Health. John has taken a lead role in developing National Rural Health Policies and has been a member of numerous government Rural Health Advisory Committees.

Contact

Professor John S Humphreys
Professor of Rural Health Research
Monash University School of Rural Health
PO Box 666
Bendigo Central VIC 3552

Ph: 03 5440 9081
Fx: 03 5440 9080

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Rural-urban disparities in health: how does Canada fare and how does Canada compare with Australia?

Raymond W Pong, Centre for Rural and Northern Health Research, Laurentian University, Ontario, Canada, **Marie DesMeules**, **Claudia Lagacé**, Public Health Agency of Canada, Ottawa, Canada

Abstract

The purpose of this paper is two-fold. First, it analyses rural-urban and intra-rural differences in health status in Canada. Second, it extends the analysis to a Canada-Australia comparison. Three types of mortality-related indicators are used to show rural-urban and intra-rural differences in health status in Canada and to compare Canada with Australia: (1) mortality due to circulatory diseases and cancer, (2) injury-related mortality and (3) all-cause mortality.

By and large, this study has confirmed previous findings that rural Canadians have poorer health status than their urban counterparts—they tend to have lower life expectancy and higher mortality rates. However, when rural is disaggregated into finer categories, different health-status patterns emerge. While the most rural areas tend to have the worst health status, Strong MIZ areas generally enjoy good health.

The Canada-Australia comparisons reveal convergence and divergence. The similarities suggest that rural-urban disparities in health status are not limited to a particular country. But there are also differences in relation to cancer mortality. As well, for several causes of death, the mortality risks in Rural 1 areas in Canada are significantly lower than in urban areas, whereas the opposite is true in Australia. These findings suggest that while there are some common patterns across countries in relation to rural-urban health status differentials, nation-specific uniqueness is to be expected.

Introduction

There is a growing interest in the relationship between place and health. Does where people live, work and play have an impact on their health?¹⁻³ There is also a lingering concern about inequity in health. How can regional disparities in health status and access to health care be reduced?⁴⁻⁵

Although regional variations in health status in Canada, particularly between rural and urban areas, have been extensively documented,⁶⁻⁹ studies tend to be restricted to specific locations, a few health indicators or a single source of data. To remedy this situation, a pan-Canadian research project titled “Canada’s Rural Communities: Understanding Rural Health and Its Determinants” was conducted by a consortium of researchers. It was national in scope, used multiple indicators and relied on various data sources. Also, realising that rural areas were not necessarily homogeneous, the research team disaggregated rural into components with greater or lesser degrees of remoteness.

The purpose of this paper, which is based on two reports,^{10,11} is two-fold. First, reporting selected findings from the “Canada’s Rural Communities” study, it analyses rural-urban and intra-rural

differences in health status in order to highlight the Canadian situation. Second, it extends the analysis to a Canada-Australia comparison. International comparisons could show whether rural-urban differentials are a unique or more global phenomenon. How health disparities manifest themselves in different societies may help identify contributing factors and opportunities for amelioration.¹² Australia has been chosen as the comparison country because it is similar to Canada in many respects, such as large geography, low population density and maldistribution of health care resources. They also have similar, though by no means identical, political and health care systems, thus making comparisons meaningful and insightful.

Data sources and methodology

Canadian annual mortality and other sources of data were used. Data for the 1986–1996 period were aggregated to the Census Subdivision (CSD) level and standardised to the 1996 census boundaries. The CSD data were then assigned to various geographic categories for rural-urban and intra-rural comparisons, which were made using age-standardised mortality rates and standardised mortality ratios. Statistical significance was tested using Byar’s method, based on the assumption of a

Poisson distribution and with “urban” as the reference group. Multiple regression analysis was used to examine the independent effect of place on mortality by controlling for selected health determinant variables.

Statistics Canada’s “Rural and Small Town” definition of rural was used, which refers to population living in areas with less than 10,000 inhabitants. To disaggregate rural, the Metropolitan Influence Zone (MIZ) classification was adopted,¹³ which is based on the proportion of rural residents who commute to urban centres for work. The four MIZ categories are:

- Strong MIZ—commuting flow $\geq 30\%$ and $<50\%$
- Moderate MIZ—commuting flow $\geq 5\%$ and $<30\%$
- Weak MIZ—commuting flow of $>0\%$ and $<5\%$
- No MIZ—very small labour force or no commuters.

In order to compare Canada with Australia with respect to rural, we relied on mortality data published by the Australian Institute of Health and Welfare,¹⁴ which are based on the Australian National Mortality Database covering the 1997–1999 period. The Australian Standard Geographical Classification remoteness classification was used, which is a 6-level categorisation based on the Accessibility/Remoteness Index of Australia (ARIA). It groups the 15 ARIA scores into six categories: major cities, inner regional, outer regional, remote, very remote and migratory. Since the two countries use different terminologies for their rural classifications, common category labels were created:

- Urban—“CMA/CA” in Canada and “Major Cities” in Australia
- Rural 1—“Strong MIZ” in Canada and “Inner Regional” in Australia
- Rural 2—“Moderate MIZ” in Canada and “Outer Regional” in Australia
- Rural 3—“Weak MIZ” in Canada and “Remote” in Australia

- Rural 4—“No MIZ” in Canada and “Very Remote” in Australia.*

Results

Rural-urban variations in health status in Canada

Three types of mortality-related indicators were used in this paper[†]: (1) mortality due to circulatory diseases and cancer—the two major “killer” diseases, (2) injury-related mortality and (3) all-cause mortality. Circulatory diseases, cancer and injuries are the common causes of death, particularly for international comparisons.¹² They have also been identified by Australia as the first three of seven national priority areas for special attention.¹⁵ All-cause mortality represents an attempt to capture the other causes of death.

Circulatory disease-related mortality

Mortality due to circulatory diseases (ICD-9: Chapter 7, codes 390–459) was higher in men than in women and generally higher in Moderate, Weak and No MIZ areas (Figure 1). The risk of dying prematurely from circulatory diseases was particularly high among people aged 20–44 in No MIZ areas (SMR for men: 1.55; SMR for women: 1.61).

Cancer-related mortality

Generally speaking, mortality rates due to all cancers were slightly lower in rural than urban areas. Among men of all ages, the rates were generally lower in rural areas (Figure 2). Among women, one exception to this overall pattern was found among those aged 20–44 in Moderate and No MIZ areas where the rates were significantly higher than in urban areas.

Mortality rates from lung and colorectal cancer in both urban and rural areas tended to be similar for most age groups and both sexes. As for breast cancer, rural women had significantly lower mortality rates in the 45–64 and 65+ age groups. Women aged 20–44 living in Weak and No MIZ areas had significantly higher cervical cancer mortality rates than their urban counterparts. Men aged 65 or over living in Moderate and Weak MIZ areas had significantly higher prostate cancer mortality rates compared to their urban counterparts.

* For additional methodological details, see: DesMeules et al. 2006 and Lagacé et al. 2007.

[†] The original study, “Canada’s Rural Communities: Understanding Rural Health and Its Determinants”, uses a comprehensive set of indicators. Because of space constraint, only three are reported in this paper.

The risk of dying from prostate cancer was elevated among men aged 45–64 living in Weak and No MIZ areas, with a risk of 16% and 36% higher, respectively, compared with urban men. Older rural men were also at increased risk.

Injury-related mortality

The overall mortality due to injuries and poisonings (ICD-9: Chapter 17, codes 800–999) increased as place of residence became more remote, and were higher among men than women. There were statistically significant differences between urban and rural, especially in No MIZ areas, and for all age groups and sexes. Standardised mortality ratios were also high among children aged 0–4 living in No MIZ areas, with the risks being more than three times higher than those in urban areas (Figure 3).

Motor vehicle accident-related mortality rates typically increased with greater remoteness in all age-sex groups. The highest risks of death were found among those living in No MIZ areas, with standardised mortality rates more than twice as high as urban residents. Multivariate regression analysis showed that there was an independent effect of place of residence on motor vehicle accident-related mortality, after controlling for various health-determinant variables.

Suicide mortality rates were over four times higher among men than women. Much higher suicide rates were found among rural men of all age groups. The pattern was less clear for women, with rates significantly lower in Strong MIZ areas.

All-cause mortality

The all-cause age-standardised mortality rate of both men and women of all ages increased with increasing remoteness, with the exception of those living in Strong MIZ areas (Figure 4). Compared to cities, the all-cause mortality rates were higher in Moderate, Weak and No MIZ areas. Age-standardised mortality rates tended to be higher in rural areas, with the exception of Strong MIZ area and those aged 65 or over.

Multivariate regression analyses were conducted to examine the association between all-cause mortality and place of residence. The association was not totally explained by the selected health determinants for men and women aged 0–44. Place of residence still had an independent and statistically significant effect on the all-cause risk of mortality in this age group. Compared to those in urban centres, rural residents aged 0–44 had an 11–33% increase in mortality risk. The risks increased with increased remoteness. An independent association between place of residence and all-cause mortality risks still existed among people aged 45–64 and 65 or over, though of somewhat smaller magnitude.

Rural-urban variations in health status: Canada–Australia comparisons

Canada and Australia were compared with respect to urban-rural and intra-rural differences in selected indicators of health status.

Circulatory disease-related mortality

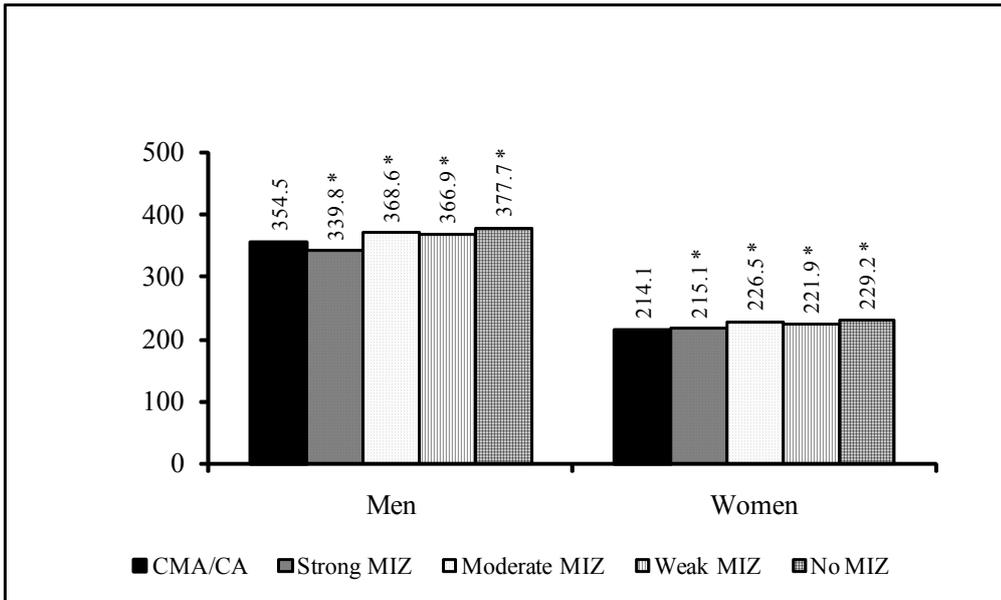
The overall pattern of risks increasing with greater rurality was consistent in both countries and among both men and women (Table 1). However, there was a “protective effect” for Canadian men living in Rural 1 areas (SMR 0.95; CI 0.94–0.97), whereas there was an 8% increased risk among men living in Rural 1 areas in Australia (SMR 1.08; CI 1.07–1.10).

Table 1 Standardised mortality ratios for circulatory disease mortality by sex and place of residence, Canada 1986–1996 and Australia 1997–1999

Place of residence	Canada		Australia	
	Men Reference	Women Reference	Men Reference	Women Reference
Urban				
Rural 1	0.95	1.01	1.08	1.06
Rural 2	1.04	1.05	1.10	1.08
Rural 3	1.04	1.03	1.10	1.04
Rural 4	1.07	1.06	1.36	1.18

Data sources: Canadian Annual Mortality Data 1986–1996, Statistics Canada; Australian Institute of Health and Welfare, 2003

Figure 1 Age-standardised circulatory disease mortality rates (per 100,000) among Canadians (all ages), by place of residence, Canada, 1986 to 1996

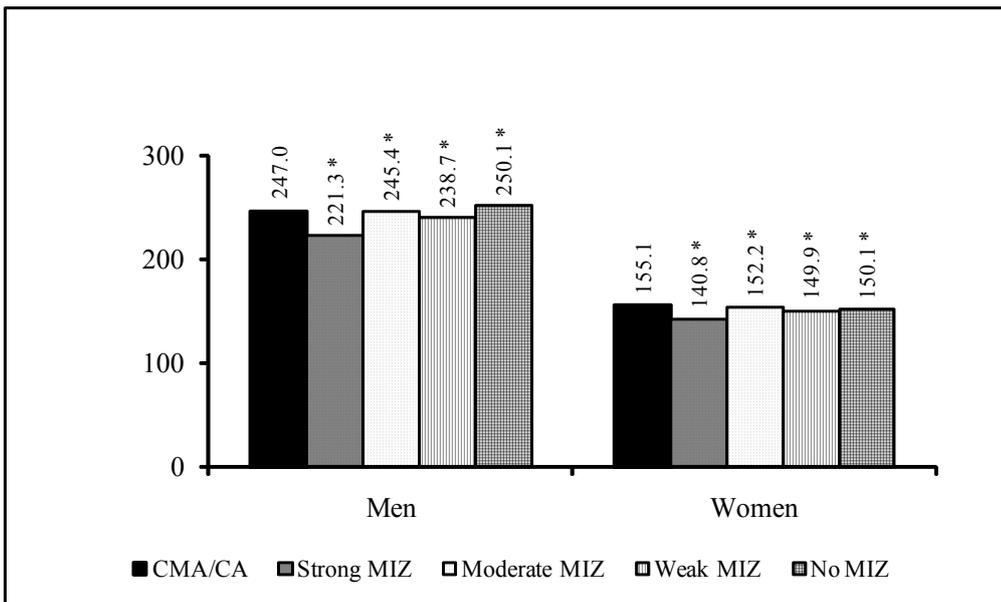


Reference group is CMA/CA.

* Statistically significant at $p < 0.05$.

Data source: Canadian annual mortality data, 1986 to 1996, Statistics Canada.

Figure 2 Age-standardised all-cancer mortality rates (per 100,000) among men and women (all ages), by place of residence, Canada, 1986 to 1996

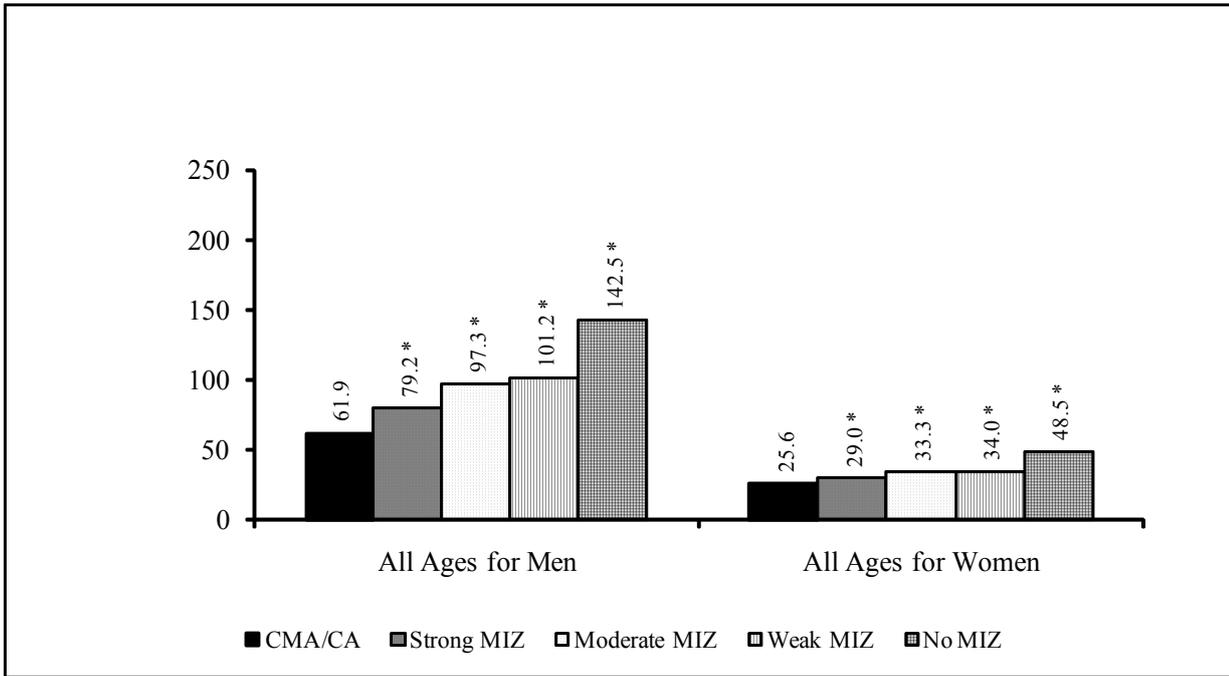


Reference group is CMA/CA.

* Statistically significant at $p < 0.05$.

Data source: Canadian annual mortality data, 1986 to 1996, Statistics Canada.

Figure 3 Age-standardised mortality rates due to injury and poisoning (per 100,000) among men and women, by place of residence, Canada, 1986 to 1996

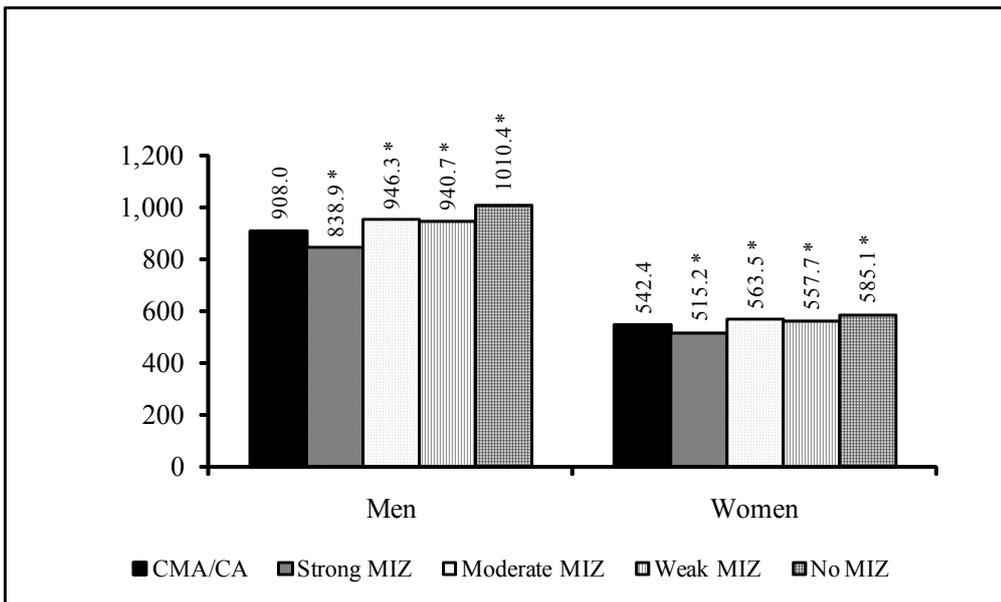


Reference group is CMA/CA.

* Statistically significant at $p < 0.05$.

Data source: Canadian annual mortality data, 1986 to 1996, Statistics Canada.

Figure 4 Age-standardised all-cause mortality rates (per 100,000) among men and women (all ages), by place of residence, Canada, 1986 to 1996



Reference group is CMA/CA.

* Statistically significant at $p < 0.05$.

Data source: Canadian annual mortality data, 1986 to 1996, Statistics Canada.

Cancer-related mortality

Cancer mortality risks were generally lower among Canadians living in rural areas, but the patterns were somewhat different in Australia, particularly among men (Table 2). The risk of dying from lung cancer for Australians was significantly elevated in rural areas, whereas rural Canadian men had risks that were either similar to or lower than their urban counterparts. The higher risks in Australia's rural areas were mainly driven by risks among people aged 45–64 (SMR = 2.15). Prostate cancer risks in Canada were elevated in all rural areas except Rural 1, whereas in Australia the risks were elevated only in Rural 1 and 2 areas. Colorectal cancer mortality risks were generally lower in rural Canada, but were higher in Rural 1 and 2 areas in Australia. Breast Cancer mortality risks were lower among rural Canadians and Australians.

Table 2 Standardised mortality ratios for cancer mortality by sex and place of residence, Canada 1986–1996 and Australia 1997–1999

Place of residence	Canada		Australia	
	Men Reference	Women Reference	Men Reference	Women Reference
Urban	0.89	0.91	1.05	1.00
Rural 1	0.99	0.98	1.06	1.00
Rural 2	0.97	0.96	1.04	0.95
Rural 3	1.01	0.96	1.00	1.08
Rural 4				

Data sources: Canadian Annual Mortality Data 1986–1996, Statistics Canada; Australian Institute of Health and Welfare, 2003

Motor vehicle accident—and suicide-related mortality

Canada and Australia showed similar patterns of mortality risk for motor vehicle accidents. All rural categories for both men and women had elevated mortality risks, compared with urban areas. SMRs ranged from 1.98 to 2.96 in Canada and from 1.65 to 3.81 in Australia (Table 3).

In both countries, rural men had significantly elevated suicide mortality risks, which were 1.5 to 2.0 times higher in rural Canada and 1.3 to 1.7 times higher in rural Australia. Among women, there were no significant differences between urban and rural Australia. Canadian women living in Rural 1, 2 and 3 areas had significantly lower suicide mortality risks, but the risk for those in Rural 4 areas was 1.5 times higher than that for urban women (Table 4).

Table 3 Standardised mortality ratios for motor vehicle accidents* by sex and place of residence, Canada 1986–1996 and Australia 1997–1999

Place of residence	Canada		Australia	
	Men Reference	Women Reference	Men Reference	Women Reference
Urban	1.98	2.01	1.65	1.65
Rural 1	2.35	2.09	1.93	1.85
Rural 2	2.18	2.12	2.42	2.27
Rural 3	2.84	2.96	3.81	3.10
Rural 4				

* Off-road accidents were excluded from the analysis in Australia; they are included in Canadian data analysis.

Data sources: Canadian Annual Mortality Data 1986–1996, Statistics Canada; Australian Institute of Health and Welfare, 2003

Table 4 Standardised mortality ratios for suicide by sex and place of residence, Canada 1986–1996 and Australia 1997–1999

Place of residence	Canada		Australia	
	Men Reference	Women Reference	Men Reference	Women Reference
Urban	1.11	0.70	1.27	1.03
Rural 1	1.41	0.89	1.27	0.97
Rural 2	1.41	0.87	1.47	0.86
Rural 3	2.07	1.50	1.65	1.18
Rural 4				

Data sources: Canadian Annual Mortality Data 1986–1996, Statistics Canada; Australian Institute of Health and Welfare, 2003

All-cause mortality

Patterns for all-cause mortality risks were similar in Australia and Canada (Table 5). Mortality risks increased with increasing rurality. However, for the Rural 1 category, the two countries differed. Mortality risks in Rural 1 areas were lower than in urban areas among Canadian men and women, but were significantly higher than in urban areas in Australia.

Table 5 Standardised mortality ratios for all-cause mortality by sex and place of residence, Canada 1986–1996 and Australia 1997–1999

Place of residence	Canada		Australia	
	Men Reference	Women Reference	Men Reference	Women Reference
Urban	0.92	0.95	1.07	1.04
Rural 1	1.04	1.03	1.11	1.07
Rural 2	1.04	1.02	1.17	1.09
Rural 3	1.12	1.06	1.49	1.51
Rural 4				

Data sources: Canadian Annual Mortality Data 1986–1996, Statistics Canada; Australian Institute of Health and Welfare, 2003

Summary and conclusion

By and large, this study has confirmed previous findings that rural Canadians have poorer health status than urban residents—they tend to have lower life expectancy and higher mortality rates. However, it is important to avoid over-generalisation. When rural is disaggregated into finer categories, different

patterns emerge. While the most rural areas tend to have the worst health status, Strong MIZ areas generally enjoy good health. Similarly, when the data are broken down by disease categories and age-sex groupings, more complex patterns become apparent. Thus, generic disease prevention and control strategies may not be sufficient. People residing in more remote areas may need special attention and specific health problems may have to be targeted.

The effect of place of residence was still evident in most cases after controlling for a number of health determinant variables. This suggests that living in rural areas, particularly in small or remote communities, is associated with greater health risks. But because of data limitations, this analysis involved only a few variables, and further research is needed.

The Canada-Australia comparisons reveal convergence and divergence. The similarities suggest that rural-urban disparities in health status are not limited to a particular country. But there are also differences in relation to cancer mortality, especially among men. The differences in Rural 1 areas are intriguing. For several causes of death, the mortality risks in Rural 1 areas in Canada are significantly lower than in urban areas, whereas the opposite is true in Australia. These findings call for further investigations to rule out cross-nation differences attributable solely to definitional or measurement artifacts. They also suggest that while there are some common patterns across countries, nation-specific uniqueness is to be expected.

This study represents an initial attempt to examine rural-urban health status disparities from an international perspective. Although rural may not have identical meanings in Canada and Australia, cross-country comparisons are feasible. Further research collaborations between the two countries, as well as with other countries, may yield greater insights about health status differentials, their causes and ways to address their adverse consequences.

Biography

Raymond Pong, PhD, is the Research Director of the Centre for Rural and Northern Health Research (CRaNHR) and a Professor of the School of Rural and Northern Health and the Northern Ontario School of Medicine, Laurentian University.

With many years of public service and academic experience in health services research, policy, and

planning, Ray strives to use research to support public policy and decision-making. His areas of research interest include rural health, the health workforce, health services and policy, population health, and gerontology.

A sociologist by training, he has conducted many studies as a principal investigator or research collaborator and has published extensively. His research has been supported by such agencies as the Ministry of Health and Long-Term Care, Canadian Institutes of Health Research, Canadian Health Services Research Foundation, Health Canada, Richard Ivey Foundation, Canada Foundation for Innovation, and Canadian Institute for Health Information.

Contact

Raymond W Pong, PhD
Research Director and Professor
Centre for Rural and Northern Health Research (CRaNHR)
Laurentian University
Sudbury, Ontario
CANADA P3E 2C6

Ph: (705) 675 1151 ext 4357

Fx: (705) 675 4855

rpong@laurentian.ca

www.cranhr.ca

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The impact of ‘rurality’ on the provision of health care in non-metropolitan areas and the rural/remote requirements of health practice and service delivery

Gordon Gregory, Executive Director, National Rural Health Alliance.

How does ‘rurality’ impact on the provision of health care in non-metropolitan areas such that health practices and service delivery have different requirements from those in metropolitan areas?

- environmental determinants
- socio-economic and socio-cultural determinants
- political determinants

A summary of the papers

The papers prepared by Craig Veitch, John Beard and Max Kamien are valuable collections of facts that are known to most of you.

My challenge is to try to move the discussion from these determinants to what they mean for health practice and service delivery.

The views expressed are my own and not those of the National Rural Health Alliance.

Craig considers the physical and built environment, emphasising the risks and dangers stemming from the environment, with one paragraph on page 67 arguing that the exposure and connectedness to nature can also have positive impacts on humans. We are reminded of the risks from bushfires, spiders, large beasts and soil-borne organisms—and it is proposed that firefighters have regular and targeted health checks.

Where the built environment is concerned, we might agree that the hazards such as asbestos, lead, uranium, arsenic, fertilisers and insecticides are balanced by the facility of shelter, education, employment, roads and health centres.

But an emphasis on the negative aspects of life in The Bush has been the characteristic approach of the rural and remote health sector, and one for which the Alliance can perhaps take some of the credit or blame. For some time now the Alliance has been attempting to balance the so-called ‘deficit model’ of rural and remote health with the positive elements both known to be in existence and speculated upon.

No one has been more assiduous in arguing for this change in balance than our current Chairperson, John Wakerman.

Craig identifies a “more functional” view of health in rural communities that means people will keep on with their normal tasks and workload unless their condition actually prevents them from doing so with subsequent adverse impacts on their health.

Craig’s final paragraph sums up some of the characteristics needed in a rural health professional and therefore helps to make the connection with health practice and service delivery: health professionals in rural areas will see cases of trauma etc etc and “They will do these and many other activities with access to fewer resources, fewer personnel, and with greater personal awareness of the impact of their actions and the outcomes on community.”

John Beard’s paper reminds us that community can influence an individual’s socioeconomic status, attitudes and health, as well as the availability of services. Residential stability and population movement have various effects on the nature and resilience of communities.

John briefly describes ‘social capital’ and ‘collective efficacy’. He and his colleagues have presented us with a case study relating to socioeconomic factors, rurality and acute myocardial infarction (AMI).

The paper refers to the way in which residential stability and population movement can exert varying influences on the nature and resilience of communities. Staff at the Alliance believe that a better understanding of the selective mobility of people to and from rural and remote areas would help our understanding of the challenges we face and this is an issue to which I will return.

John’s paper concludes, rather as the paper by Karly Smith, John Humphreys and Murray Wilson does, with the argument that when adjustments are made for socioeconomic disadvantage, ‘rurality’ is no longer statistically associated with mortality. These conclusions rely for their logic on a certain

definition of what ‘rurality’ is. In this paper we offer a simpler one: that ‘rurality’ is what characterises rural areas, so that it includes spatial characteristics often summed up as the term ‘remoteness’.

In summary the papers remind us of a number of important things.

- Much of the effort to address rural health issues must lie outside the sphere of influence of Health Departments and health service providers. Those other areas, like education, employment, roads, housing, food—need to be considered, engaged with, cajoled.
- The importance of the need to tackle Indigenous health
- The need to generate and maintain sustainable communities.
- Migration is clearly a major issue.
- Evaluation is a crucial guide for the development of health practice and services.
- We need to push on with the debate about workforce reform, scopes of practice and the so-called ‘newer professions’. Max comments on the straightjacketing of health professions by academia and medical organisations. Craig mentions the need for a broad set of procedural skills.
- We need to continue to engage with the health bureaucracy and to support changes in systems, regulations and policies that bodies like the Council of Australian Governments (COAG) and the National Health and Hospitals Reform Commission (NHHRC) are leading.

Max claims that few grassroots doctors and nurses know about health policies: at the Alliance I seem to have been surrounded by doctors and nurses who ‘know about’ health policies.

He asserts that rural areas lack the numbers necessary to sustain political influence. That should not be the case: we are 32 per cent and relatively well organised.

Max says that health bureaucrats need “a reality check”. His evidence ranges across time and across the nation—settling currently on the South Australian Minister’s new plan announced just last week. Given what we know about the staff shortages

in north-west Tasmania, for example, which of us can put hand on heart and say that these 14 hospitals will not need some rationalisation in the next ten years to assure safety?

The key piece of evidence for much of Max’s thesis is the failure of rural and remote areas to recruit Australian-trained doctors.

A reassertion of the relative status of health in rural and remote areas compared with the cities

A reminder of the Glossary of terms: we are using ASGC, in which the second and third classes can be summed as ‘regional’. The fourth (Remote) and fifth (Very Remote) can be summed as ‘remote’. Where ‘rural v urban’ comparisons are concerned, many of the problems stem from the fact that ASGC 2 (Inner Regional) includes places that are outer regional as well as places that are rural-regional: eg both Ipswich and Toowoomba. The result is that both of the following statements are true: “70 per cent of Australia’s Aboriginal and Torres Strait Islander people live in urban areas”, and “70 per cent of Australia’s Aboriginal and Torres Strait Islander people live in rural and remote areas ie not in the capital cities or the major coastal conurbations of Townsville, the Gold Coast, the Central Coast, Newcastle, Wollongong and Geelong.

Over the past little period there seems to have been a shift in the belief of some of the opinion leaders in rural and remote health—or perhaps it is a shift in the way in which they want to describe things.

At the rural session of the launch of the Australian Institute of Health and Welfare’s *Australia’s Health 2008*, it was asserted that in Queensland there is no remote difference: it is due to the Indigenous health status, and that for non-Indigenous people the difference in life expectancy is only 2.5 years.

This line of argument has also come from other quarters over the past six months or so.

So let’s be clear on what the latest evidence from the AIHW tells us.

Slicing by age group and region, it is clear that health outcomes (as measured by death rates) are worse for young and middle-aged non-Indigenous people in remote areas, than in regional areas, which are in turn worse than in the capital cities.

And how many people are there in these remote areas? Using the ASGC classification, 29 per cent of the population live in regional areas and 3 per cent in remote areas. Three per cent of 21 million is 630,000. That is equivalent to the combined population of Darwin, Hobart, Townsville, Toowoomba and Bendigo living in Remote and Very Remote areas.

One in four of this 630,000 is Indigenous. Three in every four are not.

This 3 per cent of the total population are those who are usually discounted in national plans for broadband access. They are paying the highest prices for diesel and petrol and have virtually no public transport options. They are also paying the highest prices for food. Many of them have limited access to basic social infrastructure and services which most of the country takes for granted. They are likely to experience many of the greatest effects of climate change. And these same people may well experience a significant share of the costs of an emissions trading scheme and all that it will entail.

Although there is very great diversity (due at this time largely to the resources boom) in 2006 53% of all Very Remote areas were classified in the bottom quarter of Australian socioeconomic areas. For Very Remote areas, 45 per cent of the population is Indigenous. So Indigenous disadvantage is very significant but it is not the whole story—especially for Remote and Very Remote areas.

Overall, “Compared with major cities, the life expectancy in regional areas is one to two years lower and for remote areas it is up to seven years lower.” (AIHW)

The AIHW identifies many of the contributors to this poorer health.

As you all know it reflects a range of issues: lower average education and income, poorer risk profile (more smoking etc), a harder environment (dangerous occupations and longer retrieval times) and poorer access to services. Such factors as these are compounded by the effects of family and community environments—as John Beard has pointed out.

But it is very hard to go the next step and to prioritise each of these various causes—what John started to do for AMI. It might be instructive and useful for developing health practice and service delivery if we were able to allocate an approximate

importance to each of these factors (eg the damage is 20% due to the proportion of Indigenous people, 20% due to poverty/education, 10% due to environment and 30% due to access). This would be akin to a multiple regression analysis, with the dependent variable being health status and the independent variable being all of those characteristics associated with or stemming from rurality.

Internal migration

It may be hypothesised that selective migration by the old and the sick has the effect of reducing measured health disadvantage in rural and remote areas.

Certainly internal migration is a major issue which has not much entered the debate so far about rural and remote health.

There is substantial migration of the old and the sick, as well as of the young and of health and other professionals. We need to know more about how the movement of people to and from remote areas affects reported figures for morbidity and mortality. Despite the much worse health figures overall, death rates are lower for older people in remote areas and, at least among non-Indigenous people, lower rates of cancer are observed in remote areas.

This could be explained by the movement of the frail aged and people with identifiable illnesses from remote areas to regions where more services are available. If this is happening, as seems likely, it means that the burden of illness in remote areas is even higher than suggested by the published figures.

And internal migration is interesting for a number of other health related reasons as well. There is obviously a relationship between the retention and loss of people and the retention or loss of health and other services.

We know that people make decisions about moving based on the availability of services such as a school, doctor, hospital or nursing home. Is it possible that if a community were better supported at the first sign of risk to one of its key services a consequent movement cycle might be prevented? Such preventive action would help to preserve a critical mass for the support of other services and ensure continued residence in the community of those who depend on such services. For services, as with businesses, critical mass is a key issue.

Certainly the retention of such services will reduce the likelihood of people leaving town. We know that people tend to leave rural and remote areas when it comes time for their kids' high school education: given the closure of maternity services, are couples now relocating when it is time to start a family?

As John Beard has reminded us, the movement of people will also affect the nature of a community and its consequent influence on the health of those who are there.

As I have said, we currently have great extremes of demographic change in rural and remote areas.

On the one hand there are mining and resource towns growing at such a rate that development of the physical infrastructure has fallen behind: houses are in short supply and health services cannot cope.

At the other extreme is the long-term population loss in smaller towns in pastoral areas, exacerbated over the last several years by serious drought. This depopulation has a range of effects and has for example been associated with social fragmentation and increasing rates of suicide.

Certainly it is hard to develop and sustain the sort of social capital which has a positive effect on wellbeing if the town is growing either too fast or is being seriously depopulated. The Alliance therefore has a continuing interest in policies and programs for rural development and, in particular, in the difficulties faced by remote communities striving to be sustainable, health-giving places in which to live.

Let me speculate a little further about internal migration.

The greatest contributors to differences in mortality between remote areas and the capital cities are coronary heart disease, other circulatory disease and motor vehicle accidents—all 'out of the blue' things that may not be easily predicted by the individual concerned. Can these causes of mortality be contrasted with something like cancer which becomes apparent before it is fatal and is then a reason for migration away from a remote area in which the regular treatment required cannot be obtained?

This speculation is supported by the fact that the reported incidence of cancer for non-Indigenous people in Very Remote areas is lower than in other areas.

It makes sense that someone who develops chronic disease requiring treatment is going to move to where there are services, consequently 'improving the health stats' for the area they have just left, and 'reducing the health stats' in the area to which they move.

As was agreed in earlier sessions at the symposium, internal migration is complex, comprised of several streams of movement in both directions. But if the net result is a movement of people with identifiable illnesses and frailty from remote to regional and metropolitan areas, the health differential between capital city and remote area health may be even worse than reflected in the published stats.

If there is some truth in this, it may also predict or explain differences between the health of farmers and non-farmers, rich and poor, and Indigenous and non-Indigenous people. Farmers cannot move their career to the city. The poor are less able to pay the costs of moving. And Aboriginal and Torres Strait Islander people are tied to their country and land in a way in which others are not.

Moving from environmental, economic, social and political factors to what they mean for health practice and service delivery

In an attempt to make the link between the characteristics of rural areas and their implications for health practice and service delivery, Lexia Smallwood, Andrew Phillips and myself have 'unpacked' the system that is involved. We have tried to show the workings of this system in a single table. The first column lists the bunch of characteristics that are found in a small country town.

Table slice

Rurality is a bunch of characteristics:
Characteristic
Greater distances
SES ↓
Education ↓
Indigenous ↑
OHS
Nature
Attitudes/culture (=risk factors)
Services
Small communities

Each of these characteristics of rurality has a downside or risk on which the sector has traditionally focused—and a potential upside as well.

So for example the relative scarcity of services means poor access and stretched services, with in some cases poor morale and considerable queuing. The upside of this may be that services in rural and remote areas are better integrated and more easily navigated by consumers because of their relative scarcity. Certainly there tends to be less professional turf wars in more remote areas.

The greater distances which characterise rural areas may be characterised as a risk in terms of the remoteness and isolation they will cause. But these greater distances are also the determinant of what some will see as ‘open spaces’, a sense of freedom and the location in which some people can continue to get non-pecuniary returns from being on the frontier.

Each of these characteristics of rurality impacts on the health status of an individual—but not before through the same medium or in the same way.

In the table it has been assumed that there are four mediums through which a characteristic of a rural area may impact on health: it can determine the incidence of an illness or disease, and/or it may determine its prevalence, and/or it may determine the total health impact of particular rates of incidence and prevalence, and/or it may determine the cost of a condition to both the individual patient and to the health care provider.

This horizontal slice of the table shows the mediums through which each characteristic may impact on the health status of an individual. The negative implication of the characteristic ‘greater distances’ does not affect the incidence of illnesses or diseases (so the cell has a ‘not applicable’ symbol). It may perhaps affect the prevalence of mental health for those for whom remoteness is a risk factor (indicated by one asterisk). But remoteness certainly impacts on the sequelae or health effects of particular rates of incidence or prevalence of particular illnesses (indicated by three asterisks in that particular cell of the matrix).

The full table is provided for illustrative purposes—but no attempt has been made to fill in all the cells. Note: a column has been included for the implications on cost of each of the characteristics of rurality but this schema is at an early stage of development.

It may be that this approach enables us to identify some of the characteristics of health practice and service delivery that have been understated. If this is the case it may be because we have been focusing too much on the risk factors related to the characteristics of rurality, rather than the benefits—or on the challenges to be overcome through service delivery rather than the synergy that may exist with some characteristics of rurality.

One of the attractive things about this framework is that it implies definitions of ‘rurality’ and ‘remoteness’—and clarifies the distinction between them.

The framework may be useful in searching for a links between particular characteristics of rural areas and what they mean for health practices and service delivery systems.

Biography

Gordon Gregory has been Executive Director of the National Rural Health Alliance since August 1993. The NRHA is the peak non-government body working to improve the health of people throughout rural and remote Australia, organiser of the biennial National Rural Health Conference, and owner of the Australian Journal of Rural Health. Before 1993 Gordon worked at the Rural Development Centre at the University of New England, and for nearly eight years on the staff of a Federal Minister as an adviser on rural affairs, fisheries and horticulture. He is a lapsed economist who has had a long-standing interest in policies and services for rural and remote communities in Australia.

Contact

Gordon Gregory
Executive Director
National Rural Health Alliance
PO Box 280
Deakin West ACT 2600

Ph: 02 6285 4660
Fx: 02 6285 4670

gg@ruralhealth.org.au
www.ruralhealth.org.au

		'Health medium'				Implication for health practice and service delivery
		Incidence	Prevalence	Impact (on health)	'Cost'	
Characteristic	Upside/downside					
Greater distances	open spaces, freedom					Closer! Mobile Outreach PATS
	remoteness, isolation	-	*	***		

Rurality, 'health medium' and service implications

		'Health medium'				Implication for health practice and service delivery
		Incidence	Prevalence	Impact (on health)	'Cost'	
Characteristic	Upside/Downside					
Rurality is a bunch of characteristics, each with downsides and upsides						
Greater distances	open spaces, freedom					Closer! Mobile Outreach PATS
	remote-ness, isolation	-	*	***		
SES ↓ Education ↓	simple pleasures		?			Ecological programs? Water/w. quality Income support Jobs Nat. ins. (Med. PBS) Comm. services
	poverty		*** ?			
Indigenous ↑	cultural safety, belonging					
	racial disadvantage					
Industry mix	occupations/career paths					H Promotion Education
	OHS risks	**		**		
Nature	natural benefits					Pharm supplies Clinical capacity
	natural hazards	***				
Attitudes/culture (=risk factors)	openness, empathy					'Education' Regs. (physical prevention)
	risky behaviours					
Services	integrated? easily navigated					
	scarce, stretched	-	-	*		
Small communities	closeness, community support					Nature of info. campaigns Protocols re privacy
	visibility, stigma					

Delivering appropriate and accessible health care to meet the distinct and diverse needs of rural and remote populations

Prof John Humphreys, Prof of Rural Health Research, Monash University School of Rural Health

We have just heard three fine presentations on the topic of Optimal Service Delivery Models for rural and remote Australia. My task now is to set these in context by providing a synthesis and overview highlighting the critical issues for discussion. Let me try to do this briefly under six headings:

- What *health goals* are we seeking through the provision of health care services?—because we need to agree on the direction of where we are heading;
- What are the *current drivers* of change within health service planning?—because these represent the imperatives that we need to address;
- What's *different* about rural and remote health care?—because this defines the diagnostic and differentiating aspects of context;
- What have been the health service *responses* to date?—because we are not dealing with a 'greenfield' situation and options may be constrained;
- What are the *requirements* that we agree on?—because identifying commonality hastens our ability to generate appropriate responses; and
- *How* do we achieve these goals?—the difficult issue!

As our starting point it is worth remembering that by world standards, Australians are blessed with an excellent health care system.¹ According to Podger (2006:11):

- We rank third amongst comparable OECD countries for life expectancy, sixth for health life expectancy and third in overall health system effectiveness;
- Relative to Canada, the UK and the US, a higher proportion of Australians see a doctor promptly when they need

to, and rate their care as very good or excellent;

- Waiting times for emergency departments are shorter than for the US, Canada and the UK;
- Waiting times for elective surgery are shorter than for Canada, NZ and the UK.²

What health goals are we seeking through the provision of health care services?

Considered as a system, health has four goals:

- The *good health* of citizens,
- *Equity*, ensuring services are available according to need and are paid according to capacity to pay,
- Low *cost* or value for money, and
- *Satisfaction* of the various participant—consumers in terms of access, quality, effectiveness, courtesy etc; providers in terms of the support the system gives them to apply their professional expertise and in providing reasonable remuneration, and funders in terms of return on investment.³

It is worth remembering these goals in our discussion of how best to deliver optimal health care services to residents of rural and remote communities. Clearly the issue is very complex and involves multiple considerations and players.

What are the current drivers within health service planning?

The health service arena in which we are operating is constantly changing, and health service planning is required to both predict and respond to these significant changes. Particularly important among the current drivers of change are the following considerations:

- *Demographic change*—the ageing of society is leading to a dramatic increase in the extent of chronic conditions with consequent cost increases;
- *Workforce changes*—an ageing rural workforce and changing values of new generation;
- *Changing epidemiology*—leading to a dramatic increase in the extent of chronic conditions with consequent cost increases;
- *Fiscal constraints*—escalating costs under conditions of limited resources underpin the ongoing debate about how to fund the health care system;
- *Increased expectations* from the consumer as the general level of information about health and health care improves leading to increasing demand for access to the full range of treatments and forms of care;
- *Alternative models of delivering services* such as the increasing move to care in the home and community;
- *Increased role of technology*, for example, in diagnostic and invasive procedures; and
- *Changing emphasis from treatment to wellness*—with a greater focus on public and population health.

An examination of the current health system in the light of these imperatives quickly reveals the nature of the dilemma confronting us. Changes are required at all levels of the health care system if we are to address these new challenges and maintain existing high levels of health outcomes.

What differentiates rural and remote?

Yesterday we saw that levels of health status and health outcomes decline with increasing levels of rurality and remoteness, a finding characteristic internationally.⁴ But as we know, there are also other important differences. One recent Scottish study noted:

... rural and remote practices are required to provide a broad spectrum of general medical services, often with a limited number of staff, to patients scattered over large geographic areas and often a long way from secondary medical care.^{5,6}

The key thing that differentiates rural and remote residents from their metropolitan counterparts is the effect of distance on accessibility to services. Vast distances separating small dispersed communities throughout rural and remote Australia provide enormous challenges for health authorities responsible for servicing the health needs of their populations. Increasingly many small communities are unable to sustain traditional health services at the local level, so consumers are usually required to travel to larger regional centres or depend on periodic visiting services. Alternatively consumers forego care or present late, factors which arguably contribute to the poorer health status of rural and remote residents. At the same time that many communities are experiencing loss or rationalisation of their existing health services, the need for comprehensive primary health care characterised by multi-disciplinary team approaches, to meet the needs of an ageing population and ever-increasing rates of chronic illnesses, is on the rise.

What are the health service responses to date?

As Wakerman's paper highlighted, the two critical parameters of population size and geographical location significantly influence the mode and form of service delivery. Regardless of population size or geographical location, however, most rural communities will be characterised by a need for some activity involving health promotion (information, advice, counselling), preventive action (screening, immunisation), extended and palliative care, rehabilitative and supportive care, early intervention, diagnosis and treatment, acute care and accident and emergency. Thus, for most small rural and remote communities the focus is on primary health care. As the first point of contact with the health care system, it is at this level that most health care takes place. What is at issue is:

- the level of activity required and warranted;
- the form of service best able to deliver the activity; and
- whether the service should be available through a local presence.

The literature provides evidence of a wide range of models in rural and remote Australia. These range from discrete services supported in more populous regions through to periodic mobile services that

service the many outback regions characterised by small, dispersed settlements. Recent demographic changes, combined with tight fiscal policies have combined to result in the loss or rationalisation of health care services across Australia. Moves to centralise many health facilities in major regional centres have resulted not only in longer journeys for patients, but also in increased costs in accessing health services (due to increasing journey length), increased reliance on private and community transport providers among residents without access to private transport, and often major disruption to home life. Transport disadvantage not only prevents adequate or timely access to health services but can also result in worsening health outcomes, particularly for already vulnerable groups such as the elderly, people with disabilities, low incomes, and those living in isolated areas, including Aboriginal communities.

Reviews of existing services demonstrate a number of outstanding issues that must be considered in the quest to provide appropriate sustainable health services. Central among these impediments are:

- *inflexibility in existing funding streams*— inability to move resources across programs limits the ability of health services to respond to community needs and changes within the system;
- inbuilt perverse incentives for *cost shifting* between Commonwealth and State governments;
- a funding focus on *remuneration of service providers* rather than the needs of consumers, leading to a significant degree of supplier induced demand;
- a *disease-based rather than primary health focus*—many rural communities would benefit from financing structures that support models emphasising a primary health approach that focuses on the determinants of health, disease prevention and early intervention;
- *poor co-ordination and fragmentation* in health program funding—divided responsibilities for funding different health programs limit the scope for an integrated approach to health care; and
- the *shortage and maldistribution of the health workforce* in rural and remote regions—where funding is provided for an episode of care on a

fee-for-service basis, rural areas which are characterised by a reduced availability of health providers effectively forego resources to which communities are ‘entitled’, thereby exacerbating geographical inequities in the provision of health services.

As the following table shows, these impediments operate at a number of different scales. Accordingly, a range of responses is required to address these issues.

Table 1 Impediments to appropriate sustainable rural and remote health services

HEALTH SERVICE LEVEL ⁷	CURRENT PROBLEMS WITH EXISTING SITUATION
Macro Level <i>Policy enablers</i>	<ul style="list-style-type: none"> • Legislative roles and responsibilities fragmented • Policies and plans outmoded or non-existent • Inadequate health investment and fragmented financing • Provider incentives misaligned • Inadequate health service performance monitoring and evaluation • Inter-sectoral links overlooked
Meso Level <i>Health care organisation and links to community</i>	<ul style="list-style-type: none"> • Loss of sustainable services appropriate to context • Failure to organise care for chronic conditions—uncoordinated episodic care • Health worker shortage, lack of skills and expertise • Interventions ineffective and not evidence-based • Failure to adequately address prevention • Infrastructure lacking for coordinated, integrated care • Failure to connect with local community resources
Micro Level <i>Patient interaction</i>	<ul style="list-style-type: none"> • Failure to empower patients to participate in their care and change lifestyles • Poor patient interaction and continuity of care

What are the requirements that we agree on?

Implicit across all the papers that we have heard are a number of requirements around which there exists a broad consensus.

- Access to care is supremely important. Many health services require a local presence. The benefits of “service in situ” is proven with respect to emergency care, health promotion activity, ongoing rehabilitation and maintenance of care
- The focus of rural and remote health service planning should be on ensuring integrated, co-ordinated, and seamless care for the patient. The implications of this for funding arrangements are considerable.
- Quality and safety should not be compromised. Evidence-based decision making is critical to improving the efficiency and effectiveness of care.
- Monitoring and evaluation of the performance of health services should be integral and ongoing.
- Information flow and role of IT is increasingly important.
- Because many broad environmental influences shape our health, consideration must be given to genuine primary health care approach. Early intervention must focus on prevention of ill-health and promotion of wellness.
- Public participation is essential.
- Service sustainability (ongoing ability to deliver appropriate quality care responsive to changing needs) requires systemic solutions with respect to funding arrangements, workforce, infrastructure, governance and community engagement.

How do we achieve these goals?

Now we come to the nub of the issue—What do we need to do to bring about the changes necessary to ensure appropriate, accessible, sustainable health services for rural and remote Australians?

The search for ‘innovative’ health care models for rural and remote communities has been the catch-cry for some time now. However, many innovative

models do not meet all aspects of the requirements outline above. Recent criticism of and opposition to “polyclinics” in the UK⁸, “hub-and-spoke” arrangements in South Australia, and GP Super Clinics⁹ illustrate the dilemma of how best to maximise patient access to integrated care while at the same time delivering the range of services that require certain population thresholds to be met. Moreover, so far there is little evidence that the new “super-clinic” models reduce demand on hospitals and may even result in loss of continuity of care.

Integrated health service models are distinguished by the need to maximise efficiency and co-ordination across health services, particularly through sharing of resources, geographical co-location and simple management structures. Economies thus gained enable service providers to maximise the range and mix of health care that they can make available locally in the community. Unfortunately many small dispersed rural and remote communities fail to meet the necessary population threshold and service range requirements, so it is likely that some form of ‘spoke’ or visiting service arrangement is required, supplemented by improved support for transporting patient to larger regional centres.

In the same way that many innovative models have failed to ensure sustainable service provisions, so too the current emphasis on “workforce, workforce, workforce” has failed to recognise that without all the other service pre-requisites in place recruitment to and retention in rural and remote areas will remain problematic. Nor is there any significant evidence yet to show that more rural immersion or devolved medical education by themselves will overcome the health workforce shortages characterising rural and remote regions across the world.

One thing that is clear, however, is that “success breeds success”. People like to associate themselves with successful organisations and services, which in themselves are successful because of their ability to ‘re-invent’ themselves in order to meet changing needs and requirements. Workforce issues are shown to be less of a problem for health service models that fulfil the requirements so essential to ensure appropriate, accessible, sustainable health care.

Because “no one size fits all”, our focus should be on developing strategies to ensure that key service

requirements and community needs are met rather than concentrating too much on the actual model configuration.

The papers presented by our three invited speaker provide an excellent platform upon which our discussion can take place, and I have no doubt that many participants are “champing at the bit” to have your say. Over to you.

Biography

John Humphreys is Professor of Rural Health Research in the School of Rural Health at Monash University Bendigo. John is well known for his academic expertise and research on health service provision in rural and remote areas of Australia, rural workforce recruitment and retention, rural health policy and the evaluation of rural health programs. He has undertaken extensive fieldwork throughout rural and remote regions of Queensland, New South Wales and Victoria, and has published widely in books and journals. In addition to his academic career, John has worked in both the Victorian and the Commonwealth Departments of Health. John has taken a lead role in developing National Rural Health Policies and has been a member of numerous government Rural Health Advisory Committees.

Contact

Professor John S Humphreys
Professor of Rural Health Research
Monash University School of Rural Health
PO Box 666
Bendigo Central VIC 3552

Ph: 03 5440 9081
Fx: 03 5440 9080

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From evidence to policy

Robert Wells, Menzies Centre for Health Policy, The Australian National University

Research/evidence: Mars

- Research involves:
 - better understanding
 - discovery
 - providing evidence as a basis for decision/action
- Process of gathering evidence is ordered, ‘rigorous’ with observable rules and conventions.

Policy: Mars

- Evidence-based
- Rational process
- Balancing of interests
- Long term perspective
- Open and accountable
- Objectively evaluated
- Reactive
- Ad hoc
- Responding to specific interests
- Short term horizon
- Secretive
- Spin

Evidence/policy interface

- Researchers do not understand context, political/administrative complexities
- Policy makers difficult to access
- They selectively use evidence and distort findings or use them inappropriately
- Differences of understanding between researchers and policy makers

Case studies

- SIPS Diabetes
- SIPS Asthma
- Provider number restrictions

SIPS Diabetes

- Payment for HbA1C test for diagnosed patients
- Strong evidence base this test as a marker for effective care
- Immediate high take up by GPs
- Evidence-based, simple and effective

SIPS Asthma

- Series of payments for following ‘3+ Asthma Program’
- Good evidence-base from overseas re effectiveness of program in reducing hospital admissions for severe asthma cases
- More complex payment arrangements and take-up of item poor
- Unknown to policy makers, research under way in Australia that was to show 3+ Program not attractive to GPs
- Evidence-based, complex and poor policy outcome

Medicare provider number restrictions

- Policy aimed to control doctors’ access to Medicare billing for quality and distributional purposes
- Australian medical graduates post 1996 only able to access Medicare billing if undertaking or completed relevant college training fellowship
- International medical graduates only able to practise in areas of workforce shortage

- Measure had no effect on number of doctors practising and allowed a more orderly and prioritised entry of overseas doctors
- Assumption that fully trained doctors provide more effective care but no hard evidence
- Measure was highly effective in meeting its objectives, but very controversial

Lessons

- Direct correlation between evidence and measure is best
- Simple measures preferred
- Measure must relate to policy objective
- Technical success not only criterion for ‘success’

Way forward: researcher and policy makers should be friends

- Researchers need to be more policy savvy and policy makers need to be more research literate
- A truism but how to make it happen?
- Build relationships of trust: takes time; requires compromises on both sides
- Different research funding approaches, e.g. Australian Primary Health Care Research Institute (APHCRI)
- Participation in one-off commissioned research projects

Supermarket principle

- Bulk of research effort will continue to be investigator initiated inquiry
- Bulk of policy will be made on ‘evidence’ of an eclectic and subjective nature
- Policy process is increasingly complex
- Published research provides a supermarket of evidence where policy makers can shop—even if only to store in their ‘bottom draws’

New approaches for researchers

- Research must be presented in ways that are likely to be noticed and understood by policy makers
- Distinction between evidence presentation and advocacy
- Risk of over selling
- Recognise and live with ambiguity and probability

Greater accountability for policy

- Openness and accountability for government policy making can be improved
- Possible measures
 - Policy announcements should include a statement of the policy objective and how its achievement will be measured
 - Governments be required to publish all reports they commission within a reasonable time
 - We need to work out a way of establishing independent think tanks to analyse policy that has been made and can contribute to the formulation of new policy

Some questions

- Is there such a thing as rural health research?
- What are its defining characteristics?
- What is its purpose?
- How will its contribution be measured?

A challenge

- Climate change is and will continue to be a major factor in rural health and well-being
- How can ‘rural health research’ contribute to better understanding the health impacts on rural communities and possible responses?
- Is there a role for ‘rural health research’ in the Garnaut process?

Biography

Robert Wells is Director of the Menzies Centre for Health Policy and Executive Director of the College of Medicine and Health Sciences at the Australian National University, Canberra. He works on a range of health policy and systems issues, including primary care, private health insurance, rural health and health workforce. He has participated in national advisory committees on neurosciences research and attracting greater private sector investment in health and medical research.

Robert came to the ANU in 2004 from the Australian Department of Health and Ageing where he had many years experience as a senior administrator in areas such as research, Commonwealth/State relations, health workforce, safety and quality and management of the programs for better management of major diseases such as cancer, diabetes and mental health and rural health programs. He was involved in the establishment and subsequent operations of the Australian Council on Safety and Quality in Health Care and the National Institute of Clinical Studies. He was formerly the secretary to the National Health and Medical Research Council.

Contact

Robert Wells
Director Menzies Centre for Health Policy
Executive Director College of Medicine and Health Sciences
Building 131
Garran Road
Acton ACT 0200

Ph: 02 6125 9988
Fx: 02 6125 2337

Robert.wells@anu.edu.au
www.anu.edu.au