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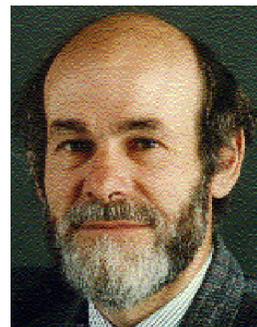
**Rural Health and the  
Health of Rural Communities**

**by John S. Humphreys**

*Worner Research Lecture 1998*

# **Rural Health and the Health of Rural Communities**

## Biography



Professor John Humphreys spent his childhood in rural Victoria before attending the University of Melbourne and Monash University. He has worked at national and international universities and is currently Chair of Rural Health and Head of the School of Health and Human Sciences at La Trobe University, Bendigo.

In addition to his academic career, Professor Humphreys has been involved with government health programs and has spent time working with both the Victorian and Commonwealth Departments of Health. During his time in Canberra he undertook a review of the National Rural Health Strategy. Professor Humphreys recently reviewed the Rural Undergraduate program in Australian Medical Schools. He is currently a member of the Advisory Committee of the Commonwealth Department of Health and Family Services Rural Health Support Education and Training Program and the General Practice Rural Incentives Program Research Sub-committee.

Professor Humphreys has undertaken extensive fieldwork on rural health issues throughout Australia. He is well known for his academic research on health service provision in rural and remote areas of Australia, a field in which he has published widely in both journals and books.

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# **Rural Health and the Health of Rural Communities**

**by John S. Humphreys**

*"Everyone is going through changes  
No-one knows what's going on  
Everybody changes places -  
but the world still carries on."*

*Alan Price, 1973: O Lucky Man*

## **Introduction**

**T**hank you for the opportunity to share my thoughts with you this evening. It is indeed a privilege to be invited to present the 1998 Worner Research Lecture. The Worner Research Lecture was named after the Worner brothers, Howard, Neil and Hill, who were students at Bendigo School of Mines, a fore-runner of La Trobe University, Bendigo. From their early childhood on a remote Mallee farm, they each went on to establish distinguished professional careers. Last year I had the pleasure of hearing Professor Howard Worner review the history of Bendigo gold and its importance to the city<sup>1</sup>. Tonight's lecture is the fourth in the series, and I have opted to use this opportunity to share with you some insights on rural health. Given their rural backgrounds, I feel sure that the Worner brothers could relate to this subject.

As residents of non-metropolitan Australia, we are experiencing turbulent times as the processes of change impact upon our lives and the well-being and fortunes of our rural communities. One aspect that has attracted particular attention in recent years is that of rural health. Even the professional medical organisations openly admit to the existence of a 'crisis' in health care in rural Australia <sup>2</sup>, thereby admitting the validity of the long standing complaints of rural communities and individuals so frequently and so poignantly documented by the mass media.

Underpinned by grassroots concerns, buoyed by interest from the media and an increasingly political dimension to the problem of how to provide adequate and appropriate health services in rural areas, rural health has become a topical point of discussion. Rural health stakeholders and rural communities continue to pressure governments to respond to problems of rural health with measures likely to result in improved delivery of services and health outcomes. Unhappily I do not believe that present government policies are sufficiently developed or adequately resourced yet to achieve that goal. For this reason this pressure from both rural and professional organisations must be sustained if the goal of optimal health for all people living in rural and remote areas is to be achieved.

Having said this, I want to acknowledge that there have been many positive rural health initiatives and policies that have been undertaken by individuals and organisations, both government and non-government, in recent years. For example, in this region, the Loddon-Mallee Regional Office of the Victorian Department of Human Services and the Bendigo Health Care Group are two organisations that are giving priority attention to rural health issues. Recent initiatives focus on rural health workforce recruitment and retention, meeting the education and training needs of rural health workers, providing support and care services in rural communities, and developing alternative ways of delivering health programs and services.

I do not intend to review the achievements in these areas tonight. Suffice to note that for rural health policies and programs to be effective in bringing

about improved health outcomes it is imperative that they be based on a sound understanding of the rural health issues and an appreciation of the wider rural scene. For that reason I have chosen to use this opportunity tonight to discuss with you the salient health issues confronting rural Australians, and to place them in a broader context of critical national issues confronting Australia.

But first by way of background, I want to begin by walking you quickly along the path I have trodden over the last 20 years as I have pursued my research interest in this field so that you are under no illusions about where I am coming from or, I hope, about the underpinnings of the views I will be expressing. For more than 20 years I have been actively studying rural health issues, focusing specifically on the health and health care needs of rural Australia and how best to deliver appropriate health care and services to small rural communities. It did not take me long to recognise the complexity of rural health issues, and the intimate connection between health and broader rural community issues.

My early research on the health service needs of residents living in small rural communities took place in north-west and far north Queensland. During this time my eyes were opened to the considerable problems associated with geographic and social isolation, inadequate transport and lack of basic health related services associated with rural regions. I spent time talking with members of the aboriginal community in Camooweal, visiting the small communities and outstations served by the Royal Flying Doctor Service clinics, consulting with nurses who staffed hospitals without the services of doctors, and discussing the needs of rural communities for health services with isolated general practitioners and key local community people.

At a time when the then Queensland Premier Joh Bjelke-Peterson lauded his state as the only one providing free hospital care, I was staggered by what to me was an absence of adequate or appropriate services in rural regions. In several communities residents were simply unserved or under serviced by basic primary care services. In many areas the ratio of

patients per doctor was far in excess of the national or state average. Even with the valuable role played by the Royal Flying Doctor Service, the health needs of remote residents were not met. So bad were the circumstances in some communities that residents either neglected to treat their health problems, or were required to travel hundreds of kilometres in order to obtain appropriate health care often at considerable economic, social and psychological cost to the patient and immediate kin. The problem of availability and accessibility to services was exacerbated by the significant inequities in the distribution of services, problems associated with inadequate transport and lack of co-ordination between organisations involved in the delivery of health care <sup>3</sup>.

Several years later I undertook a study of the health needs of three small communities in the prime wheat-growing region of the Wimmera in Victoria <sup>4</sup>. This was one of the first systematic studies in Australia to ascertain the health status and health care needs of inhabitants of small rural communities and their farming hinterlands. The results indicated significant differences in the pattern of rural health from those obtained by the National Health Survey conducted by the Australian Bureau of Statistics. In particular, they demonstrated that the health status of rural dwellers was significantly worse than that of metropolitan residents in Australia on a number of counts, such as health problems affecting sight, hearing, skin, and the digestive and musculo-skeletal systems.

More recently, I surveyed residents of Nyngan and Gilgandra and several small isolated rural communities in the cotton, wheat, and sheep-growing region around Moree in New South Wales about their need for and access to health care services. Many of the people whom I interviewed expressed surprise that someone was actually interested enough to visit and talk with them about health care issues. All too frequently their comments indicated a degree of resignation with their lack of local health services and the problems associated with accessing them.

My concern with how rural Australians actually cope with meeting the health needs of their families from day-to-day is the basis of a project I

am currently undertaking with two of my colleagues from the School of Health and Human Sciences at La Trobe University, Bendigo. In fact, the research plan that I have developed for the School of Health and Human Sciences focuses on issues of rural health and welfare and the well-being of rural communities in the region. Academic staff within my School are working with professional and community-based organisations to improve the health and well-being of rural residents and their communities, and to promote the equity, efficiency and quality of health and community services in rural regions.

Most of my research to date has been conducted in order to ascertain basic factual information relating to the health status and needs of rural inhabitants living in different communities, their patterns of utilisation and knowledge of health care services and their attitudes towards how best to access health care services. During this time I have had the opportunity to visit the homes of thousands of rural Australians in many different communities. The information so willingly and generously given by participants in my research has provided a comprehensive and representative basis for many insights into the health status and health needs of rural Australians.

When I took up my position at La Trobe University, Bendigo twelve months ago, it became apparent to me that people had many different ideas of what rural health was all about. Despite the breaking down of traditional discipline boundaries, the notion of 'rural health' conjures up a large, ambiguous and often mystifying field of activity. I am regularly confronted with queries from the media about all manners of rural health issues. Invariably the request is for immediate and simple answers to quite complex issues.

I thought that I would use this opportunity to comment on some of the salient issues and dispel some of the myths that abound about rural health, a subject on which my substantial and diverse experience enables me to speak with some authority. In what time remains this evening, I shall comment on seven propositions relating to rural health, namely -

- Rural health is distinctive
- The health status of rural Australians is 'worse' than that of metropolitan dwellers
- Rural health problems are a product of 'rurality'
- The health status of rural Australians can be improved by better rural health services
- Improving the health status of rural Australians requires specific rural health workforce skills
- The health status of rural Australians is dependent on the health of rural communities
- Meeting the health needs of rural people requires a specific policy response.

## Rural health is distinctive

The concept of health is something with which we are all familiar. More often than not in western communities, health is acknowledged more in its absence than its presence. Hence when a member of the family, a friend or colleague becomes sick, ill, unwell or stricken by disease or injury, our focus is directed to matters of ill-health. In short, health is invariably something that is generally taken-for-granted.

Health is defined by the World Health Organisation "as a state of physical, mental and social well-being, not just the absence of disease or infirmity" <sup>5</sup>. Interestingly enough, such a holistic definition parallels the whole-of-life view articulated by Australia's indigenous community. For indigenous Australians health refers not just to the physical well-being of the individual but importantly to the social, emotional and cultural well-being of the whole community. Health services should enable every individual to achieve their full potential as human beings and thus bring about the total well-being of their communities.

Measuring the health status and health needs profiles of any population or community is naturally dependent of how such groups are defined.

The way in which populations and communities are grouped as urban, rural and remote will always influence and sometimes may even determine differences in the patterns of morbidity and mortality. Precise definition of what is meant by the term 'rural' has proved to be an elusive goal, and as yet there is no clear and unambiguous statement of the parameters by which rural is defined <sup>6</sup>. What is also readily acknowledged, however, is that there is no single rural Australia. In the same way that metropolitan areas are recognised for their socio-demographic heterogeneity, so too rural Australia comprises a complex mosaic of activities and communities differentiated on the basis of geographic, economic, environmental and socio-demographic characteristics.

In considering whether the pattern of health in rural areas is distinct from urban areas, three possible scenarios present themselves:

- there is no appreciable difference between the health of rural and metropolitan Australians.
- rural areas suffer the same types of problems as urban areas, only the prevalence of them is different.
- rural residents and communities may suffer from health problems, which are distinctive both in incidence and prevalence.

Unfortunately, the task of evaluating which of these alternatives best fits the facts is problematic. The evidence about the extent to which there is a specifically rural epidemiology is mixed <sup>7</sup>. Certainly there is evidence that some respiratory problems like 'farmers lung' (including bagassosis), problems resulting from the extensive use of agricultural herbicides and pesticides, allergies relating to dust and pollens, skin cancers, brucellosis and hydatids are essentially outcomes of rural living.

Other studies indicate that the real difference between rural and urban community health problems lies not so much in the type of illness, but rather in the prevalence of particular problems. For example, significant health differentials have been noted between rural and urban populations in mental illness, youth suicide, injuries, road trauma, and alcohol and

substance abuse <sup>8</sup> - as we are so frequently and graphically reminded in the mass media.

Comprehensive reviews and ongoing studies of morbidity patterns in rural Australia are relatively recent phenomena <sup>9,10</sup>. But the preliminary evidence suggests the existence of inequalities in the prevalence and incidence of many diseases, the practice of health related behaviour, and the social and economic circumstances that predispose people to these risk factors and behaviours (and also which are likely to lead to a higher level of mortality from them, even when they are relatively easily treatable!). Thus the *Preliminary Report of the Health of Country Australians* found significantly higher death rates overall in rural areas, and even more extreme disadvantage in remote areas <sup>10</sup>.

Closer to home, a recent discussion paper from the Victorian Government Department of Human Services noted that rural Victorians have greater incidences of heart attack, lung cancer, diabetes, depression and they suffer more injury through accidents <sup>11</sup>. VicHealth (the Victorian Health Promotion Foundation) noted that death rates for people living in non-metropolitan areas are 15% higher for men and 9% higher for women than metropolitan residents, and in the case of avoidable death are even larger - 47% for men and 30% for women <sup>12</sup>.

In summary, the evidence in favour of there being distinct patterns of rural morbidity and mortality based on the profile of conditions, variations in prevalence, and worse outcomes from a variety of health problems is now effectively undeniable.

## **The health status of rural Australians is ‘worse’ than that of metropolitan dwellers**

A word of caution should be noted in interpreting the rural-urban health status differential because the data on which such a judgment is made may reflect different patterns of illness behaviour, differing access to primary care, or variations in practitioner behaviour as much as variations in

health status. Moreover, there is currently no agreed baseline against which to measure the extent of health disadvantages that rural and remote communities experience <sup>8</sup>.

Rural Australia runs the gamut from major provincial centres, small country towns, isolated mining communities, indigenous outstations, and includes both the closely settled farming regions of south eastern coastal areas as well as the vast sparsely settled areas of northern and inland Australia. Because of this diversity it is hardly surprising that the pattern of health status is similarly differentiated, ranging from the appalling status of morbidity and mortality characterising indigenous communities to communities whose health status is arguably as good as that characterising the ‘healthiest’ suburbs in metropolitan areas.

Despite the absence of any systematic morbidity profile of rural Australians, there is mounting evidence to suggest the existence of a pattern of health status with considerable scope for improvements. The myth that good wholesome country food and clean air has resulted in a healthier population in the bush has been dispelled by existing morbidity and mortality data. According to the Australian Institute of Health and Welfare, the health of Australians living in rural and remote regions is "worse than those living in capital cities and other metropolitan areas" <sup>13</sup>. These health inequalities are exacerbated by a gradient of health disadvantage that displays "consistent increments in mortality and morbidity, as one travels away from capital cities and other metropolitan areas" <sup>9</sup>.

In summary, and despite the absence of a universally agreed, consistent and robust definition of ‘rural’, the conclusion reached by the Australian National Audit Office was that the health status of rural Australians is appreciably worse than that of their metropolitan counterparts <sup>8</sup>.

## **Rural health problems are a product of ‘rurality’**

Rurality and remoteness have been identified as independent determinants of health. Distance, harsh environments, specific occupation hazards, sparse infrastructure, inappropriate attitudes to health and illness and risk-taking behaviours, all of them particularly characteristic of rural Australia, can be shown to underpin the health status of rural communities<sup>9</sup>. Geographical location is important because of the effect that locational disadvantage has on access to services. The tyranny of distance and lack of transport remain the major impediments to accessing health care for many rural Australians. In addition the rural environment affects the nature of economic activity and lifestyles characterising rural inhabitants, which in turn are reflected in their health status. For example, while independence, resourcefulness and resilience are admirable qualities, studies of rural men’s health have shown how they can also contribute to the failure to address health at a time of need, thereby affecting their health status detrimentally. The health status of women too has been similarly disadvantaged by lack of appropriate health care services at the local level.

At the same time, the importance of other determinants of health should not be overlooked. Abundant evidence points to a critical relationship between the distribution of wealth and such social conditions as employment and education and the health of a society<sup>14</sup>. Lack of employment and education can and do have a direct and measurable effect on health status, while income inadequacy is clearly associated with adverse health risk factors such as poor diet, drug and alcohol abuse, and risk-taking behaviour.

Compared with many major urban centres, rural areas can be considered to be significantly worse-off. Support for the view that rural regions are disadvantaged with respect to the extent and quality of such important elements of social well-being as education and employment comes from recent research on regional patterns of well-being. Using selected social

indicators (including unemployment, education, single parent families and public housing tenancy), a study conducted by two of my former colleagues at the University of New England has indicated that rural regions for the period 1976-1991 showed a worsening in levels of well-being, demonstrating the regional impact of the ‘rural crisis’. The worst ten percent of regions were largely in the remote outback or northern Australia<sup>15</sup>. An examination of the level of farmers’ incomes further highlights the negative impact of drought and falling commodity prices. The latest taxation statistics show that farming districts dominate the list of the ten postcodes with the lowest mean income<sup>16</sup>. Specifically in Victoria, "compared with their metropolitan counterparts, many rural residents experience significant problems of inequity with respect to access to, and provision of, health services, employment, and cultural and social support which determine a population’s health status<sup>12</sup>.

While it is often difficult to disentangle the effects of socio-economic from locational disadvantage, there is little doubt that the coincidence of both creates the worst of all possible health environments. With many rural and remote communities having experienced significant economic hardships in recent years due to climatic vagaries, market fluctuations and the process of deregulation and economic restructuring, it is hardly surprising that living in rural and remote locations exacerbates an already poor health status. The need to investigate more fully the determinants of rural health status is part of the research agenda of La Trobe University, Bendigo.

## **The health status of rural Australians can be improved by better rural health services**

Many rural communities lack the health care services they require. For many small, isolated rural communities struggling to access health care services, the focus on rural health has concentrated largely on one, albeit important, aspect of rural health care - obtaining and retaining the services of a local doctor and hospital. Rural Australians are imbued with a ‘medical model’ of health care services, with the doctor, hospital and pharmacist

acknowledged as by far the most valued services in the community<sup>17</sup>. Invariably the principal concern is with the availability of emergency and acute care services that are expected to be available locally at a time of need.

Recent media programs have highlighted the severe under-supply of general practitioners, specialists and the closure of hospitals throughout rural and remote Australia, the horrendously high workloads of rural practitioners, and their often inadequate working conditions. The most recent estimates put the shortfall of rural medical practitioners at around 1,000, with the problem likely to worsen as aging rural doctors retire from practice and are not replaced. Given the recognised contributions made by health services to the maintenance and improvement of health status of communities, considerable attention is being paid to the recruitment and retention of an appropriate rural health workforce in order to overcome the acute shortage of many health workers in inland rural areas. However, much more remains to be done in order to ensure that appropriate rural health services are available and accessible throughout rural Australia. Specifically we must implement recruitment and retention incentives and adequate remuneration for all health professions seeking to take up rural practice, provide suitable infrastructure and working conditions, and guarantee appropriate and adequate education, training and support.

The notion of 'better' health services is different from simply providing more health services. Bearing in mind that resources are finite and relatively scarce, it is important to target funding to those services which are likely to yield the greatest health gain. In this regard, health promotion and illness prevention programs that fall within a public health approach are needed to complement the provision of curative care. These public health measures can identify risks for illnesses and diseases, and monitor health outcomes in order to evaluate the success of the strategies in reducing health risks. Some of the greatest improvements in health status result from changing human behaviour, lifestyles and environmental factors

that impact upon health. Mandatory wearing of seatbelts, for example, has significantly impacted upon mortality rates associated with rural road trauma and is now accepted as a way of life. The advent of tractor roll bars has resulted in a reduction in levels of farmer mortality resulting from tractor accidents. Improved water quality is vital to the control of disease in rural communities yet the Victorian State Auditor General found that only 57 percent of Victoria's rural population was supplied with water that met health guidelines for "microbiological quality". The scope for improvement in other determinants of health besides the provision of services appears to be significant.

In addition to addressing the need for improved curative care services, health promotion and illness prevention programs, it is vital that the health services for rural Australia should not generate or try to cater for unrealistic expectations. Individuals and communities need to be aware of the key determinants of health and causes of ill-health. "Biomedical research into the leading causes of death in the United States and Australia has suggested that the major problems are not heart disease, cancer and cerebrovascular disease, but tobacco, alcohol, diet and inactivity"<sup>18</sup>. In rural communities, for example, the problems associated with the outcomes of excessive alcohol consumption and subsequent outrageous behaviour including indiscriminate casual sexual activity characterising Bachelor and Spinster Balls is well-known<sup>19</sup>. Knowledge of the determinants of health forms the basis for individuals taking greater responsibility for their own health through adopting health lifestyles which minimise preventable illhealth.

To a large extent unrealistic and inappropriate community expectations are often driven by media reports which focus on expensive state-of-the-art equipment, and promote dependency on immediate 24 hour-a-day services. While there is no doubt that appropriate emergency and evacuation facilities are a necessity for all people in rural and remote regions of Australia, it should be understood that to be healthy does not require advanced medical

technology such as CATscan capacity in every community. What we do need in order to make major inroads into rural ill-health is to ensure that rural communities have adequate access to those primary health care services which can address the major health needs of the community.

Unfortunately, as the Victorian Health Promotion Foundation noted, it is apparent that "people in rural and remote communities face many fundamental barriers which reduce access to appropriate health care. In particular, distance, a shortage of health care professionals, reduced opportunities for local access to a wide range of primary health care services, difficulties with inter-sectoral co-ordination, economic and financial pressures and decreasing services falling in line with declining populations affect the quality of community life" <sup>12</sup>.

### **Improving the health status of rural Australians requires specific rural health workforce skills**

Research has demonstrated that the roles and needs of health professionals practising in rural and remote communities differ from those in metropolitan areas. Rural general practitioners require a broad knowledge of the range of illnesses found in rural communities, a broader skills base than metropolitan general practitioners, and a strong sense of self-reliance <sup>18,20,21</sup>. To equip doctors with the skills necessary for rural practice, the training for rural doctors must cover the spectrum of rural and remote general practice involving generalist, procedural and public health activities <sup>22,23</sup>.

Similarly, the roles of nurses in rural communities can differ significantly from those of their urban counterparts by virtue of their need to display increased independence, possess a wider range of skills and have a wider clinical experience <sup>24,25</sup>. There is currently considerable interest in advanced nursing practice in the form of rural nurse practitioners in order to meet some of these needs <sup>26</sup>. Specific education, training and support measures for other health professional and community service workers in rural and remote areas is also needed <sup>27</sup>. The School of Health and Human

Sciences at La Trobe University is developing post-graduate programs which recognise these distinctive requirements.

The diversity of health problems confronting rural health workers requires them to be equipped with a wide range of skills, together with a sound understanding of the rural context in which they are operating - the rural culture and ethos, attitudes, behaviour and lifestyle behaviour, and a distinctive practice environment. It is only in recent years that the metropolitan dominated environment in which health professionals have traditionally been trained has been broken, and that greater recognition has been given to the need for regional educational institutions and rural health training units to take a leading role, together with significant placement of students and trainees in rural and remote settings. Here at La Trobe University, Bendigo we are undertaking such a role with as much vigour as possible under the increasingly tight financial and organisational constraints that we are being forced to work within by governments.

### **The health status of rural Australians is dependent on the health of rural communities**

While we can all readily accept a symbiotic relationship between the health of an individual and that of the community in which the individual lives, it is still important to distinguish between 'healthy communities' and the 'health of individuals within communities'. This distinction has been nicely made by Gregory when he noted that healthy communities refer to functional communities which provide "support, esteem, caring and a sense of belonging to those in them. This does not mean that the same individuals will be healthy - what makes individuals healthy is a genetic predisposition for good health, contented and active mind, a body free of disease, attitudes and behaviour which minimise accidents and self-inflicted injury, and access to a comprehensive range of health services" <sup>28</sup>.

Today the quality of life enjoyed by people in the bush is unquestionably in decline. The effects of loss of local services, especially but not only health care services, are, have been and continue to be devastating. Despite their resilience, stoicism, fierce independence and pride, residents of small rural towns face an uphill battle against overwhelming odds to save their communities. The drift cityward of young people and families who are able to move leaves behind 'trapped' people who not only lose dignity and hope but, as suicide statistics highlight, increasingly and tragically even their lives. Loss of infrastructure and more importantly the depreciation of rural social capital undoubtedly impact on the health and well-being of rural Australians as well as community sustainability. As many rural and remote communities fall below the critical threshold for maintaining existing health services, alternative models of health service delivery will be required if the health needs of their residents are to be met. To do this we must have a clear understanding of their health needs, patterns of behaviour with respect to the use of health services, and attitudes towards health care. With such knowledge as our guide we can then begin to formulate suitable ways for delivering health care and ensuring equity of access to health.

For those communities throughout rural and remote Australia that are struggling to maintain their existing populations and functional roles, it is not easy to sustain or re-engineer Gregory's sense of a healthy community. In the past, the traditional drivers of community development, have been the community's sense of shared purpose, collective wisdom, resources and sense of responsibility capable of being harnessed so as to successfully meet the needs of the community<sup>29</sup>. Fortunately, there are examples of best practice in public health and community development which demonstrate how communities can and are coping with this problem<sup>30</sup>. Importantly too, there appear to be moves at the national level to develop policies and provide some infrastructure to support rural communities. The possible establishment of an Office of Rural Communities is currently under consideration. In the meantime, the Department of Primary

Industries and Energy, traditionally an 'industry' portfolio, now has the issue of rural communities as one of its ten priorities for action.

## **Meeting the health needs of rural people requires a specific policy response**

The need for a specific policy response to rural health issues has long been acknowledged but it was not until 1994 that Commonwealth, State and Territory Health Ministers endorsed a National Rural Health Strategy<sup>31</sup>. Its declared purpose was to provide a co-ordinated framework to ensure equitable access to effective health care for rural and remote communities through the provision of appropriate health services, the promotion of measures designed to maximise the health status of rural and remote residents, and the adoption of strategies that minimise barriers and problems which currently impede the delivery of effective health care<sup>32</sup>.

This declaration was a public acknowledgement that up until this time other mainstream health policies and programs had been failing to address specific rural health requirements associated with the nature and prevalence of disease, workplace practices, and the rural context. But it was also clear that there were many other associated and interrelated problems requiring resolution before significant improvements in health status would be likely to occur. High on the agenda must be greater inter-sectoral co-operation, better rural health status and workforce data, co-ordination of government programs, reduced dependence on uncertain funding, and a greater focus on continuity of care.

In policy terms it is important to recognise that no single strategy will be appropriate to all rural areas or health care providers. Even as far back as 1978 the *Country Towns Country Doctors* conference recognised that the "diversity and individuality of this vast subcontinent does not allow for all-embracing or uniform solutions"<sup>33</sup>. Issues vary from region to region, and multiple approaches are likely to be most effective in improving the availability of health care in rural areas. Importantly, the National Rural

Health Strategy recognised this fact and provided for each health authority and region to progress reform measures according to its circumstances.

The National Rural Health Strategy contributed to important progress in other ways. For example, it outlined the principles which should underpin programs with respect to rural health. It also provided a 'nesting' place, under which there could be greater co-ordination of activity across industries, services, and governments, and, most importantly of all, perhaps, it focused attention on the need and scope for collaborative and partnership relationships.

Even with the advent of the National Rural Health Strategy, however, it is worth noting the outcome of the Australian National Audit Office's recent audit of the implementation of that Strategy which recommended that the Commonwealth Department of Health and Family Services should establish a clear portfolio objective and key priorities for rural health. In other words, despite the flurry of activity by governments in the last decade and the significant contribution of the National Rural Health Strategy, rural health still lacks a sufficiently distinct identity within the Commonwealth government. Specifically, the National Audit identified the failure of many Commonwealth government health programs to have a specific rural focus, the absence of rural health as a key priority within its programs, the relatively small amount of financial resources allocated to rural health and the lack of performance indicators to measure outcomes as all contributing to shortcomings in addressing the health needs of rural Australians<sup>8</sup>. These same observations are equally valid for State governments. In short, while the need for an identifiable rural health focus has long been realised and publicly acknowledged, government after government has been unwilling or unable to come to grips with the problems involved, during which time the situation of rural health care in many communities has moved from serious to critical.

## The way forward?

My talk so far has sought to outline the extent to which rural health is a significant and distinctive area of concern in its own right, which warrants a specific and immediate response. From the evidence available it is easy to conclude that the health care needs of many rural Australians continue to be neglected or may be slipping behind acceptable standards in terms of availability and accessibility.

Undoubtedly there is much that remains to be done before it can be said that the goal of achieving "optimal health for all people in rural and remote Australia" has been achieved. Particularly apparent is the under-supply of appropriate health workers in rural and remote communities, and continuing problems in terms of their recruitment and retention. Moreover, the absence of adequate and appropriate services is exacerbated by the significant and worsening gap between the level of well-being in metropolitan and rural regions.

The issues that I have raised are not only important, even provocative, but arguably extend beyond simply questioning the nature of appropriate policy responses or suggesting which ameliorative measures might best be introduced in order to most effectively deal with these issues. They highlight several things. In the first place, it is vital to ensure that myths, anecdotes and pork-barreling do not drive the research agenda and the expenditure of the scarce resources that are available for rural health matters. Any successful rural health strategy or program must be founded on sound knowledge of rural health status and the health care needs of rural populations as distinct from those of other segments of Australian society. In this regard academics at this campus of La Trobe University, in collaboration with other key health organisations such as the Bendigo Health Care Group and Department of Human Services, are currently undertaking strategic research in rural health. Only this kind of research will be able to form the basis of informed decision-making with respect to the provision of health care services.

Secondly, the need for a specific rural health focus in government programs is abundantly clear. However, in the absence of an implementation plan which identifies critical directions for action and specific performance indicators by which outcomes are measured, progress in bringing about improved health status will be slow.

Thirdly, and most importantly in my view, my thesis suggests that a different and more fundamental set of questions is needed if the future health of rural Australians is to be seriously improved. Unfortunately these questions are not simply isolatable and readily resolved for they relate to what Paul Keating described as "Big Picture" issues, the discussion of which is something I am aware is not fashionable these days. Nonetheless, it is answers to these questions which ultimately will determine the allocation of resources to, and the structure of, health care services in rural Australia. In the absence of such a critical debate at the national level, however, we run the risk of exposing ourselves to the notions purveyed by "the peddlers of social snake oil" and simplistic but divisive policy responses akin to those which have recently underpinned adherence to the latest political phenomenon of our time.

So, let me conclude this evening by suggesting those issues which I believe warrant urgent national debate and indicating why I see these as so fundamental to the question of improving health in rural Australia.

## **What sort of society do we want?**

My first question is simply what kind of society do we want? More specifically, do we want to live in a society in which the already entrenched divisions between haves and have-nots continue to deepen and with that the associated differentials in health status and provision of health care services.

This fundamental question highlights a central issue on which we are unlikely ever to achieve unanimous agreement. However, a national debate on this issue will undoubtedly identify the principles that we value

as a society and the parameters by which the allocation of scarce resources within our society may be guided. Eva Cox touched on these concerns in her 1995 Boyer lectures<sup>34</sup>. As a society we need to be clear about the relative values we attach to human and social capital (that is, people) vis-à-vis financial and physical capital. Human capital, comprising our skills and knowledge, and social capital, referring to the processes between people which establish networks, norms and social trust and facilitate co-ordination and co-operation for mutual benefit, have not been afforded high priority in recent years. Instead, the focus of debate has concentrated on the impact of globalisation, dependence on the market place, the benefits of competition and economic rationalism, with people perceived as customers and clients rather than citizens. Issues of health, education and community development have only featured prominently on the political agenda when the largely detrimental consequences of fiscal stringency have given rise to local community outcry.

The debate on what kind of society Australians want will identify the limits on our willingness to continue to survive as an egalitarian society and a clearer view of what is possible or available for health care in rural Australia.

## **The form of the national settlement system**

A second and not unrelated issue is how does the national settlement system assist or inhibit our quest to achieve the sort of society to which we aspire? At first glance such a question might appear to be somewhat unusual. A little more thought however will reveal that this is a matter of absolutely fundamental concern since essentially it directs our attention to an examination of the role of rural communities in a post-industrial, post modern world. Given that social and economic change is unavoidable, and given the vulnerability rightly being felt by residents of small and isolated rural communities, the issue of how governments address the various problems characterising farming communities, small towns, indigenous communities, and regional centres is critical. In the absence of

a national vision for rural Australia which identifies its value and place in the national psyche and economy, and in the face of death by a thousand cuts, the high incidence of risk-taking, drug and alcohol abuse, mental illness and suicide in rural areas is understandable if not acceptable.

What is required is nothing short of a fundamental re-assessment of the contribution of rural and regional Australia to the economic and social well-being of the Australian community. This issue has persisted since the post-war reconstruction plans for regional decentralisation but the debate has certainly not proceeded very far since the provocative paper published five years ago by Sher & Sher<sup>35</sup>. Unless rural communities become part of a broader society which addresses the needs of all its citizens, there exists the very real danger of the 'balkanisation' of isolated and marginalised outgroups.

In Australia we are now entering a new era of pronounced place-to-place differences in quality of life that flies in the face of the much vaunted national pre-occupation with egalitarianism. In the current political climate of economic rationalism, regional differentiation increases as prosperous areas become more competitive and resource-rich and those marginalised in the economy slip further behind both in absolute terms as well as relatively. For example, in the absence of government regulations, the privatisation of telecommunications and postal services diminishes community service obligations so that rural areas become disadvantaged as profitability is put ahead of services. Private sector organisations such as banks and stock and station agents similarly depart from smaller centres taking with them jobs and incomes, and creating additional burdens for those who remain. This invariably sets in train a downward spiral of cumulative causation, as population decline leads to a loss of school children and teachers, further exacerbating the contrasts in geographical patterns of well-being between resource-rich and resource-poor regions. And health services are both leaders and followers in this sequence.

While I would not wish to advocate a return to formal policies of decentralisation and regional development, there is nonetheless much that can be

done to genuinely empower rural communities and regions to enhance their capacity to make a productive and sustainable contribution to the national economy. One such means is to free up the resources to which they are entitled from various government programs to spend as they see fit. Some academics argue that greater regional autonomy and discretion, with its emphasis on community self-determination, might facilitate local leadership and initiative<sup>36</sup>. In this way country communities might then be able to better service their local needs with alternative more appropriate models of service delivery.

## The role of the state

A third fundamental issue relates to the role of the state in serving and maintaining the type of society we want? Recent decades have seen western societies advocate greater dependence on the market place with governments assuming a minimalist role. Unfortunately the ideologues of this perspective, together with their media advocates, have been extremely persuasive. Less readily apparent however have been the distributional consequences of unfettered marketplace activity and competition policy. Yet these too are critical ingredients in any debate over the future direction of health policy development.

Since capital knows no allegiance to place, and is oriented solely to profit and market share, rural and regional communities have frequently borne the costs of change without any real commensurate benefits. Fortuitously the recent debate about the privatisation of Telstra has led to a more enlightened and explicit evaluation of the role of public versus private and the geographical consequences associated with their contrasting imperatives. As a result, government has been required to move towards regulating private organisations in order to ensure that they fulfill community service obligations.

Useful too have been the recent evaluative studies undertaken on the effect of competition policy and compulsive competitive tendering<sup>37</sup>. One study described the impact in rural areas thus - "Unalloyed competition ... leads

to industry concentration and market dominance. Potentially this translates to the economic hollowing of country Victoria; where metropolitan Melbourne and half a dozen regional centres will in the future service the needs of ever-declining rural population, bereft of local services, local opportunities and local control"<sup>38</sup>. Withdrawal of the state from some of its traditional intervention activities and roles as a provider of services has clearly put at risk those groups with little ability to pay and areas of concern that do not lend themselves to market solutions.

Greater dependence on market forces in my view has not only exacerbated socio-economic and geographical inequality, but has relegated considerations of equity and justice to a minimum. Even in the most difficult economic circumstances, and particularly in periods of rapid change, the need for equity and justice are principles that become more rather than less important. We need policies that encourage the practice of social capital formation in the public sphere, and should be extremely wary of policies based on blind adherence to privatisation, competitive individualism, loss of public capital goods and excessive competition in the provision of services such as education and health care. In the words of Eva Cox, "we need to undermine the political policy focus on the lone, greedy figure of Economically Rational Man"<sup>34</sup>.

Governments must reclaim the ground of intervention that they have relinquished to large corporations whose economic clout allows them to drive the political agenda in terms of 'who gets what where'. My argument is based around the need for greater public intervention - not in the form of central control so much as increasing the capacity of people to determine outcomes at the local regional level. In this way, we might redress the problems felt by people who feel alienated, disempowered, demoralised, and insecure in a post-industrial world dominated by corporate power.

## Social costs of inequality

The fourth issue follows logically from these - namely what are the costs to society as a whole of maintaining increasing levels of social and geo-

graphical inequity? Any situation that fails to enable people to fulfill their basic needs, recognise their full potential or which, deliberately or inadvertently, brings about harm through neglect can result in irreversible consequences. Such consequences often require considerable expenditure in the form of reactive and expensive support and rehabilitation programs. The atrocious health status of many indigenous Australians<sup>39</sup> and the tragic loss of life through rural youth suicides<sup>40</sup> are obvious examples. Less apparent, but no less real, are the hidden dimensions of poor health status recently publicised by the study of men's health in rural areas by O'Hehir<sup>41</sup> and the Burdekin enquiry into mental health<sup>42</sup>. I doubt anyone in this audience is prepared to stand by and accept that because a person lives in a remote or small isolated community they must therefore be condemned to a diminished set of life chances, health status or quality of well-being.

Given the importance of socioeconomic factors as determinants of health, and knowing the increasing geographical differentiation in levels of well-being, it is apposite and imperative to ask the question whether rural areas are getting their fair share of resources and opportunities? Such a question is not easily answered in dollar terms. To quote the Auditor General "there is no information available on the level of total expenditure on rural health services throughout Australia"<sup>8</sup>. However, available health indicators clearly indicate that the only answer is an emphatic "NO"!

Recognition of the geographical concentration of socio-economic disadvantage has significant implications for the health status of rural Australians. As we have already seen, there are clear relationships between health status and income, education, housing, transport access and occupation. Arguably policies and programs addressing the socio-economic disadvantages of living in rural and remote areas may lead to greater improvements in health status than those targeting specific diseases<sup>43</sup>.

## Inalienable rights

My final issue is one that has been flagged elsewhere but appears largely to have fallen on deaf ears. Are there any health service access rights to which all people should have access regardless of where they live? In its recent discussion paper on primary health and community service support system, the Victorian Department of Human Services has adopted the principle that the same range of 'core' primary health services should be available regardless of where a consumer might happen to live <sup>11</sup>. Endorsement of this principle of universal access rights has significant implications for the types and ways in which health services are provided. Moreover, endorsement of this principle raises the critical question of how such universal access rights are to be met and at what cost. In short, how much of whose money in what way? The recent controversy in New Zealand of an elderly renal patient reportedly denied access to dialysis treatment illustrated the complexity of moral and pragmatic issues.

In geographical terms, the consequences of this debate for residents of isolated rural and remote regions would be significant indeed. As noted above, there is little evidence to date that dependence on the market place through the competitive tendering process has resulted in either improved access or a better quality of service. On the contrary "it would seem that a number of what were once generally regarded as essential building blocks for quality - service integration, strong nexus between service planning and delivery, highly-motivated and well-trained staff, philosophy of public service and communal benefit, and active consumer participation - are in the process of being discarded or marginalised" <sup>38</sup>.

## Conclusion

In directing attention to these bigger picture questions I have been trying to stress the need to adopt agreed principles as the basis for determining the allocation and distribution of resources and consequently the structure of the health care system. In the absence of any overarching framework, policies and programs designed to meet the health care needs of rural and

remote Australians may well continue to suffer marked inequities, problems relating to accessibility, continued lack of co-ordination, and poorly integrated health care pathways.

But now it is time to try to draw these various threads together. I would like to do this by outlining my vision for the health of rural Australians and their communities. I am aware of the dangers of crystal ball gazing, but what is endeavour without purpose and vision. Where would we be without the likes of Alvin Toffler, the Club of Rome or even Barry Jones? Whereas history looks backward to reflect on what has happened and why, vision is forward looking about what is possible and how. How optimistic we are may well depend on the perspective from which we perceive the world and what we believe is possible even in the face of seemingly insurmountable odds. Often it is easy to succumb to resignation and pessimism. However, I recommend that we model our future approach on examples of pioneers who battled in the face of daunting impediments and whose achievements and legacies grew from small initiatives. In this regard I recall Albert Facey's life story - *A Fortunate Life* <sup>44</sup> and the account by Jean Giono entitled *The Man Who Planted Hope and Grew Happiness* <sup>45</sup>. I commend both of these books to you as a way we might reflect on what can be.

My own vision of society, utopian as it may seem, is one based on diverse, sustainable communities, varying in size, location, economic base, and social composition. That is, a settlement system that caters for a pluralistic population, in which the health status of rural Australians would match that of metropolitan dwellers and in which rural residents would have the skills and capacity to maintain healthy communities. All citizens, regardless of where they live, would have access to health care services which are responsive to the specific needs of all population subgroups, a health care system that integrates health promotion, restorative services and continuing care, and one which maximises the scope for collaboration of health workers in multidisciplinary teams and co-ordinating the activities of health care services. Entry points into the system and pathways for care

would not disadvantage any Australian on the basis of their place of residence, be it in an urban, rural or remote location, and would enable continuous and co-ordinated patient care. Ready access to information and programs relating to health promotion and the prevention of ill-health would enable citizens to adopt and maintain healthier lifestyles, thereby reducing the need for curative care treatment and resulting in improved health status of rural and remote communities. In turn, healthier individuals contribute to healthier communities.

Australia can no longer drift along without a systematic and strategic approach to rural and remote communities. It was remarked recently that people are able to cope with change if they can see a future. The current lack of a national vision for rural communities and rural development has undoubtedly impeded sustainable economic and social development in rural Australia. Much will be required in order to reverse the current political mindset. I am optimistic that serious national debates on the issues that I have outlined briefly above will be forthcoming. Moreover, I have no doubt that rural Australians, as they have done in the past, will demonstrate through their resolve, resourcefulness and sense of community that a productive national economy and just and fair society is possible. This can only be achieved through the intimate bonding of city and country.

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## References

1. Worner HK & Johnston RF, 1997: *Bendigo Gold: Past Present and Future*, Bendigo, La Trobe University
2. Australian Medical Association and Rural Doctors Association of Australia, 1998: *Increasing Medical Services: Discussion Paper*, Canberra
3. Humphreys JS, 1985: A political economy approach to the allocation of health care resources: the case of remote areas in Queensland, *Australian Geographical Studies*, 23(2), 222-242
4. Humphreys JS & Weinand HC, 1989: Health status and health care in rural Australia: a case study, *Community Health Studies*, 13(3): 258-275.
5. WHO, 1979: Alma-Ata 1978. *Primary Health Care*, Geneva: World Health Organisation.
6. Humphreys JS, 1998: Delimiting rural: implications of an agreed rurality index for health care planning and resource allocation, *Australian Journal of Rural Health*, forthcoming.
7. Humphreys JS & Rolley F, 1991: *Health and Health Care in Rural Australia*, Armidale: University of New England.
8. The Auditor General, 1998: *Planning for Rural Health*, Canberra: Australian National Audit Office.
9. Titulaer I, Trickett P & Bhatia K, 1997: *The Health of Australians Living in Rural and Remote Areas: Preliminary Results*, Canberra: Australian Institute of Health & Welfare.
10. Fragar LJ, Gray EJ, Franklin RJ & Petrauskas V, 1997: *A Picture of Health*, Moree: The Australian Agricultural Health Unit.
11. Victorian Government Department of Human Services, 1998: *Towards a Stronger Primary Health and Community Support System: a Discussion Paper*, Melbourne: Aged, Community & Mental Health Division.

12. Victorian Health Promotion Foundation, 1998: *VicHealth Letter*, 9, 2-4.
13. Australian Institute of Health & Welfare, 1998: *Australia's Health 1998*, Canberra: Australian Institute of Health & Welfare.
14. Montague P, 1995: Economic inequality and health, *Rachel's Environment and Health Weekly*, 497.
15. Walmsley DJ & Weinand HC, 1997: Is Australia becoming more unequal?, *Australian Geographer*, 28, 1, 69-88.
16. Australian Taxation Office, 1998: *Taxation Statistics 1995-96*, Canberra: Australian Government Publishing Service.
17. Humphreys JS & Weinand HC, 1991: Health care preferences in a country town, *Medical Journal of Australia*, 154: 733-737.
18. Connor BH, 1998: *A Professional Odyssey in General Practice*, McGraw-Hill Book Company Australia Pty Ltd: Roseville.
19. Somerville A, 1996: *A Bird in the Ute is Worth Two in the Bush*, Bundoora: La Trobe University.
20. Strasser R, 1995: Rural general practice: is it a distinct discipline?, *Australian Family Physician*, 24: 870-876.
21. Commonwealth Department of Health and Family Services, 1996: *General Practice in Australia 1996*, Canberra: General Practice Branch, Commonwealth Department of Health and Family Services.
22. Commonwealth Department of Health and Family Services, 1998a: *General Practice Education: The Way Forward*, Canberra: Commonwealth Department of Health and Family Services.
23. Commonwealth Department of Health and Family Services, 1998b: *General Practice: Changing the Future through Partnerships*, Canberra: Commonwealth Department of Health and Family Services.

24. Handley A, 1996: *Australian Rural Nurses, Education, Training and Support*, Whyalla: Australian Association of Rural Nurses.
25. Sieglloff L, 1997: *Rural Nursing in the Australian Context*, Deakin, Royal Collage of Nursing.
26. Keyzer DM, 1997: Working together: the advanced rural nurse practitioner and the rural doctors, *Australian Journal of Rural Health*, 5: 184-189.
27. Sturme R & Edwards H, 1991: *The Survival Skills Training Package*, Canberra: Commonwealth Department of Community Services and Health
28. Gregory G, 1998: *Communities, Community Participation and Health*, Paper Presented at the Surviving in a Changing Environment Forum, Bairnsdale, 17 April.
29. Wise J, 1996: *Community Education: The Sleeping Giant of Social and Economic Development*. Paper Presented at Queensland Positive Rural Futures Conference, Biloela, 29-30 May, 1998, 14.
30. Chapman L, 1997: Public health and rural development: some best practice activity on the ground, in National Rural Public Health Forum Papers Book, *Strengthening Health Partnerships in Your Rural Community*, Canberra: National Rural health Alliance.
31. Australian Health Ministers Conference, 1994: *National Rural Health Strategy*, Canberra: Australian Government Publishing Service.
32. Australian Health Ministers Conference, 1996: *National Rural Health Strategy Update*, Canberra: Australian Government Publishing Service.
33. Walpole R, 1979: *Rural Health. Proceedings of the Rural Health Conference of RACGP*. Melbourne: Newton Press.
34. Cox E, 1995: *A Truly Civil Society*, Sydney: Australian Broadcasting Corporation.

35. Sher J & Sher KR, 1994: Beyond the conventional wisdom: rural development as if Australia's rural people and communities mattered, *Journal of Research in Rural Education*, 10(1): 2-43.
36. Sorensen AD & Epps R (eds.), 1993, *Prospects and Policy for Rural Australia*, Melbourne: Longman Cheshire.
37. The People Together Project, 1998: *Turning People into Commodities*. Carlton: The People Together Project.
38. Ernst J, Glanville L & Murfitt P, 1998: Issues in the implementation of compulsory competitive tendering in local government in Victoria. *Urban Futures*, 24: 1-6.
39. Bhatia K, 1995: An overview of Aboriginal and Torres Strait Islander health: present status and future trends, *Australian Health Review*, 18(1): 125-128.
40. Standing Committee on Social Issues, 1994: *Suicide in Rural New South Wales*, Legislative Council, Parliament of New South Wales, Report Number 7.
41. O'Hehir B, 1995: *Men's Health: Uncovering the Mystery*, Mt Gambier
42. Human Rights and Equal Opportunity Commission, 1993: *Human Rights and Mental Illness, Report of the National Inquiry into Human Rights of People with Mental Illness*, AGPS, Canberra.
43. Peach HG, Pearce DC & Farish SJ, 1998: Age-standardised mortality and proportional mortality analyses of aboriginal and non-aboriginal deaths in metropolitan, rural and remote areas, *Australian Journal of Rural Health*, 6: 36-41.
44. Facey AB, 1981: *A Fortunate Life*, Ringwood: Penguin Books.
45. Giono J, 1981: *The Man Who Planted Hope and Grew Happiness*, Brooksville, Maine: Friends of Nature.

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Howard Worner's distinguished career in academia and industry led him to his present honorary professorship at the University of Wollongong, where he has been Director of the Microwave Applications Institute since 1989. In 1994, La Trobe University conferred on him the degree of Doctor of Science (honoris causa).

Neil Worner pursued a career in civil engineering, including the position of Chief Civil Engineer with the Snowy Mountains Hydro-Electric Authority. His career continued in senior and advisory capacities in Australia and over-seas on projects such as the design and construction of major dams.

Hill Worner's career included several years on the Executive of the CSIRO, and 22 years as Professor of Metallurgy and three as Dean of Engineering at The University of Melbourne, where he is now Professor Emeritus in Engineering.

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