

Health and Rural Infrastructure

Submission by the National Rural Health Alliance



to

**House of Representatives Standing
Committee on Primary Industries and
Regional Services**

**Inquiry into Infrastructure and the
Development of Australia's Regional
Areas**

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This submission was prepared in March and April 1999 specifically for the House of Representatives Standing Committee on Primary Industries and Regional Services. The views in it may not reflect those of individual Member Bodies of the NRHA.

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EXECUTIVE SUMMARY

The National Rural Health Alliance (NRHA) is the peak non-government body concerned with rural health issues. It consists of 20 Member Bodies, representing health professionals, providers and consumers, and each Member is a national organisation in its own right. The views expressed by the Alliance are not necessarily those of every member organisation.

The Alliance exists because, fundamentally, health outcomes for rural and remote Australians are significantly worse than those of their metropolitan counterparts. This partly, but by no means entirely, reflects the particularly poor health status of the rural and remote indigenous population. There is a wide range of proximate causes of this poorer health status, notably greater risk of death from injury and heart disease, but also a wide range of other illnesses. Behavioural differences may explain, at most, a small proportion of these poorer health outcomes. The main reasons for poorer health outcomes in rural and remote Australia are lower levels of access to health services and lower socio-economic status.

In this context, solutions to the lower health status of rural and remote Australians must include improved access to health services, but must go beyond this to include a more equitable regional distribution of life opportunities more generally - in short, rural development. Physical infrastructure of the type under consideration by the Committee's Inquiry is an important part of rural development; hence the Alliance welcomes the Committee's Inquiry and this opportunity to have an input to it.

Recommendation 1:

That recognition be given to the role that a lack of regional development plays in generating socio-economic disadvantage in rural and remote Australia and, in turn, the role that socio-economic disadvantage plays in causing poor health outcomes. Rural development, therefore, should be seen as relevant to improving health outcomes, as well as to other economic and social objectives.

Access to health services is poorly distributed on a geographic basis. For example, in a twelve month period metropolitan Australians are nearly twice as likely to see a General Practitioner, and nearly three times as likely to see a specialist, as Australians living in remote areas.

Nevertheless, it is recognised that public policy for some decades now has sought to ensure an equitable geographic distribution of public hospital beds, and has been largely successful in this aim. The same, however, cannot be said of private health facilities, or of aged care facilities, both of which are distributed inequitably.

Recommendation 2:

That measures to encourage private sector involvement in the health sector also include measures to ensure an equitable geographic provision of private sector services.

Recommendation 3:

That the Government seek to apply its targets for aged care facilities on an equitable geographic basis, implying a need for special measures to bring rural and remote provision of those facilities up to metropolitan levels.

One means by which delivery of health care services to rural and remote Australians can be improved is through the application of new information technologies. There are however a number of barriers to the adoption of these technologies in the health sector, including communications infrastructure limitations and health funding arrangements. Moreover, it is important that the application of such technologies deliver *improvements* in health outcomes and not act as a substitute for existing services.

Recommendation 4:

That the National Bandwidth Inquiry establish a goal of sufficient bandwidth to support a telehealth application requiring 128 kbps to be available to every community with a physical health facility. The Inquiry should assess the extent to which this goal is not met at present and the extent to which USO and other initiatives will achieve the goal, establish a time frame for achievement of this goal, and necessary policy mechanisms and monitoring arrangements to ensure its achievement.

Recommendation 5:

That reforms to health funding arrangements to remove barriers to new infrastructure developments in the form of telehealth networks be investigated.

Recommendation 6:

That the proposed comprehensive health strategy, part of the 1998 *Strategic Framework for the Information Economy*, should provide real national leadership to the development of telehealth applications and the provision of the required infrastructure.

More broadly, the new communications technologies have a great deal of potential in rural development and in overcoming social and geographic isolation. For this, however, the necessary infrastructure must be in place - and, as far as a majority of rural and remote telephone subscribers are concerned, the necessary infrastructure is not in place. The Alliance welcomes those policy initiatives that have been announced in this area, but believes that more needs to be done.

Recommendation 7:

That further policy initiatives be undertaken to directly improve the quality of rural and remote telephone lines. These initiatives should include an explicit plan for progressive upgrading of the quality of lines, on a "worst first" basis, against measurable and enforceable targets. Possible mechanisms for enforcement could include the Universal Service Obligation arrangements and/or the Customer Service Guarantee arrangements.

Transport is, of course, a key part of rural infrastructure. It has particularly important implications in terms of access to health services, and hence health and transport planning systems need to be properly co-ordinated.

Recommendation 8:

That health planning should take more cognisance of transport issues, and transport planning of health needs. In particular

- **the PATS/IPTAAS scheme should be reviewed, particularly in relation to eligibility criteria, escorts, return travel, cross-border issues, pre-payment, and access to allied health and other non-medical professions**
- **health transport services should receive higher priority in health funding arrangements, including discharge arrangements for people returning home.**

Any inquiry into infrastructure in rural and remote Australia must address the issue of the lack of basic public health and other infrastructure in remote Aboriginal communities. Contrary to popular misconceptions, this is a problem that can be successfully addressed through appropriate community-based approaches.

Recommendation 9:

That positive recognition be given of the need for improved public health infrastructure in remote Aboriginal communities, and of the proven role of community-based approaches to address public health and related problems in those communities.

Current approaches to rural development are, simply, not working. There needs to be a greater, more coherent, policy focus across all three levels of government and involving local communities. More interventionist policy strategies are required, recognising the many benefits of rural development - and the many costs of the absence of rural development - that go unrecognised in standard cost-benefit calculations.

Recommendation 10:

A Rural Development Commission be created, to work on developing policies in a wide range of areas to stimulate rural development, in conjunction with all levels of Government and local communities.

The National Rural Health Alliance believes that rural development is both desirable and achievable. It trusts that the Committee's work will go some way towards achieving this goal, and commends the recommendations in this Submission for the Committee's attention.

1 INTRODUCTION

The National Rural Health Alliance is the peak non-government body concerned with rural health issues in Australia. The Alliance is made up of 20 Member Bodies, each of which is a national peak body in its own right. Member organisations represent the broad spectrum of health professionals and providers as well as consumers. While the Alliance seeks to represent all its member organisations collectively, the views expressed in this Submission are not necessarily those of each individual organisation.

The Alliance exists because health outcomes in rural and remote Australia are worse than those in the major cities. Rural and remote Australians have higher death rates and shorter life expectancies.

One of the major reasons for these poorer outcomes is poorer access to health services. This is directly relevant to the Committee's terms of reference in relation to facilities that deliver health services. In recent times there has been widespread recognition of the problem of doctor shortages in country areas - there has been much less recognition of similar and related issues applying across the spectrum of health services and health professions.

More broadly, poorer health outcomes also reflect socio-economic disadvantage. Incomes are lower, job and career opportunities fewer, and access to services is poorer. If there is to be equality in health outcomes between metropolitan and non-metropolitan Australia, then there will also have to be equality in lifetime opportunities. In short, there will have to be regional development - the overarching theme of the Committee's inquiry.

The Alliance does not believe, however, in taking an unduly pessimistic view of the situation of, or prospects for, rural and remote Australia. Rural and remote Australia has many strengths, and there are regions within rural and remote Australia where regional development is occurring. The task of policy must be to build on those strengths, and address the problems. The Alliance welcomes the Committee's Inquiry into the infrastructure aspects of this issue.

This Submission is organised as follows. Following this Introduction, Section 2 provides background information on health outcomes for rural and remote Australians and the factors giving rise to those outcomes. Section 3 discusses the importance of infrastructure in the areas of health facilities, communications, transport and water supplies. The concentration on these issues is not to deny the importance of other issues, particularly education. Section 4 concludes with an outline of the Alliance's suggested approach to regional development, and Section 5 concludes with a list of recommendations.

2 HEALTH OUTCOMES IN RURAL AND REMOTE AUSTRALIA

2.1 Overall Health Status

Table 1 provides the aggregate figures for health status as represented by death rates and life expectancy for Australian regions.

Table 1 - Life Expectancy and Death Rates

	Metropolitan		Rural		Remote		Total	
	Capital cities	Other	Large Centres	Small Centres	Other	Centres		
LIFE EXPECTANCY (years)								
Males	75.6	75.2	74.5	74.7	74.7	72.3	71.5	75.2
Females	81.2	80.8	80.6	80.8	80.8	78.3	77.4	81.1
DEATH RATES (deaths per 100,000 population)								
Males	828	843	886	883	877	1037	1003	849
Females	509	522	534	529	527	651	636	518

Source: AIHW 1998, pp 10,14.

Life expectancies for males are one year longer in the capital cities than in rural areas, and four years longer than in remote areas. For females, the differences are half a year and nearly four years respectively. Similarly, death rates in capital cities are some 5% lower than in rural areas, and 20% lower than in remote areas.

These are significant differences by any measure, and justify a considerable national effort to redress them.

2.2 Proximate Causes of Regional Health Status Inequality

2.2.1 Indigenous Mortality

Part of these differences in health status between metropolitan and non-metropolitan Australia is the significantly lower health status of Australia's indigenous population, and the greater proportion of indigenous Australians living in rural and remote areas.

However, as shown in Table 2, health outcomes as measured by death rates are worse for both indigenous Australians and non-indigenous males in rural and remote Australia than for their counterparts in metropolitan areas

- among indigenous males, death rates in metropolitan areas are 4% lower than in rural areas and 20% lower than in remote areas
- among non-indigenous males, death rates in metropolitan areas are 5% lower than in rural areas and 8% lower than in remote areas

- the greatest regional inequality is among indigenous females, where indigenous death rates in metropolitan areas are 16% lower than in rural areas and 30% lower than in remote areas
- only among non-indigenous females is there little differences in death rates across the three areas.

Of course, concentrating on the regional dimension of health inequality should not blind us to the much greater inequality in health outcomes between indigenous and non-indigenous Australians regardless of location. Differences in death rates range from 90% for both males and females in metropolitan areas up to 187% for females in remote areas.

Table 2 - Indigenous and Non-Indigenous Death Rates by Region (deaths per 100,000 population)

	Metropolitan	Rural	Remote	Total
MALES				
Indigenous	1500.4	1559.0	1879.2	1739.6
Non-Indigenous	800.0	836.9	873.5	811.0
Total	804.6	845.8	1055.1	830.5
FEMALES				
Indigenous	983.9	1170.2	1418.2	1273.9
Non-Indigenous	520.7	521.3	494.5	520.3
Total	524.4	528.1	708.5	535.0

Source: AIHW 1998, p 15

In short, inequalities in health outcomes between indigenous and non-indigenous Australians explain some but by no means all of the inequalities in health outcomes between metropolitan and non-metropolitan Australians. Rural health is partly, but not entirely, about indigenous health. **But health outcomes for indigenous Australians, particularly those in rural and remote areas, are so appalling that indigenous health must be given first priority, both in its own terms and as a major rural health issue.**

2.2.2 Injury

As shown in Table 3, differences in death rates from injury explain a significant proportion of differences in overall death rates between metropolitan and non-metropolitan areas, and road vehicle accidents explain a significant proportion of the differences in death rates from injury.

Death rates from injury among males are 34% higher in rural areas than in the capital cities, and 94% higher in remote areas.

Comparing Table 3 with Table 1

- differences in death rates from injury explain some 34% of the additional death rate for males in rural areas compared with capital cities, and some 26% of the additional death rate for males in remote areas
- differences in death rates from road vehicle accidents explain over half of the additional death rates from injury among males, and hence around 20% of the difference in the total death rate among males, between capital cities and rural areas. The figures in respect of remote areas are 36% and 10% respectively
- it should be noted that these statistics relate to the place of residence of the victim, not the place of accident. Hence these statistics are likely to underestimate the dimension of the issue from a transport policy perspective in that they do not include metropolitan residents who die on country roads.

Table 3 - Death rates from Injury

	Metropolitan		Rural			Remote		Total
	Capital cities	Other	Large Centres	Small Centres	Other	Centres	Other	
ALL INJURIES								
Males	53.0	59.7	64.8	64.1	77.5	94.6	108.5	59.5
Females	20.0	21.5	20.3	22.3	25.8	30.3	40.6	21.4
OF WHICH,								
ROAD VEHICLE ACCIDENTS								
Males	13.0	15.5	18.7	18.5	27.6	31.4	31.0	16.2
HOMICIDE								
Males	1.2	2.0	1.8	2.4	2.1	5.9	8.1	2.3
SUICIDE								
Males	19.2	21.7	23.8	22.6	23.9	22.6	29.9	20.7

Source: AIHW 1998, pp 17, 21, 52.

It is difficult to disentangle from the statistics the extent to which this higher death rate from injury reflects a higher incidence of injury as against a higher death rate from a given incidence of injury. It could be expected that both factors would be at work.

Homicide rates are slightly higher in rural areas, and significantly higher in remote areas, than in the capital cities. However, differences in homicide rates explain only 2% of the higher overall death rate among males in rural areas, and 3% of the higher overall death rate among males in remote areas.

The difference in suicide rates between metropolitan and non-metropolitan areas is not as great as often suggested. Suicide rates among rural males is 22% higher than in the capital cities, accounting for 8% of the total difference in male death rates; while suicide rates among remote males is 27% higher, accounting for 3% of the difference in total death rates. Among females, suicide is actually lower in rural areas than in the cities.

2.2.3 Disease

Table 4 shows some of the diseases with a significant impact on differences in death rates between metropolitan and non-metropolitan Australia.

Death rates from coronary heart disease are 10% higher for males, and 8% higher for females in rural areas, and 14% higher for males, and 12% higher for females, in remote areas than in the capital cities. Among males, this difference accounts for 38% of the difference in total death rates between rural areas and the capital cities, and 15% of the difference in total death rates between remote areas and the capital cities.

Death rates from diabetes are 5% higher for males, and 12% higher for females, in rural areas than in the capital cities; for remote areas these figures are 74% and 138% respectively. Differences in death rates due to diabetes account for only a small part of the total differences in death rates between rural areas and the capital cities, but 7% of the difference for remote males and 12% of the difference for remote females.

Table 4 - Death rates from illnesses

	Metropolitan		Rural			Remote		Total
	Capital cities	Other	Large Centres	Small Centres	Other	Centres	Other	
CORONARY HEART DISEASE								
Males	205.0	216.7	231.9	225.6	221.9	237.1	232.3	212.4
Females	113.0	121.0	128.6	122.1	118.8	135.6	120.8	116.4
DIABETES								
Males	16.8	12.9	16.0	18.0	18.3	30.4	28.4	17.0
Females	11.5	10.2	13.0	11.6	13.6	24.0	29.7	12.1
ALL CANCERS								
Males	233.1	239.6	240.4	243.1	233.2	260.0	228.9	234.8
Females	139.4	139.4	136.1	138.9	139.0	155.8	145.8	139.3

Source: AIHW 1998, pp 32, 36, 38.

The death rate from all cancers is 2% higher among rural males, and 4% higher among remote males, than in the capital cities. This accounts for 8% and 4% of the differences in total death rates respectively. The death rate from cancers among females is lower in rural areas, but 7% higher in remote areas, than in the capital cities; this latter figure accounts for 8% of the difference in total female death rates between remote areas and the capital cities.

2.2.4 Summary

Table 5 puts together this information into a summary of the relative contribution of each cause of death to the differences in death rates observed between metropolitan and non-metropolitan Australia.

Table 5 - Contributions to Differential Death Rates (%age)

	Rural vs Capital City	Remote vs Capital City	
	Males	Males	Females
ALL INJURIES	34	26	12
of which			
- motor vehicle	19	10	6
- homicide	2	3	3
- suicide	8	3	..
CORONARY HEART DISEASE	38	15	10
DIABETES	2	7	12
CANCER	8	4	8

2.3 Behavioural and Socio-Economic Explanations

It is often suggested that there are behavioural explanations for some of this observed pattern of health inequality. The Institute of Health and Welfare (AIHW 1998) provided a number of indicators, which can be grouped as follows

- those that are slightly worse in rural and remote Australia. These include female obesity, male alcohol consumption, male blood pressure, tobacco smoking, male physical activity (measured as those who walk for exercise)
- those that are slightly better in rural and remote Australia, such as male cholesterol levels and use of sun protection
- those where there is little difference between metropolitan and non-metropolitan Australia, such as male obesity, female alcohol consumption, female cholesterol levels, female blood pressure, breast and cervical cancer screening and dental consultations.

Clearly, behavioural factors can explain only a small proportion - if any - of the health disadvantages of rural and remote Australians. Of much greater significance, socio-economic disadvantage is greater in rural and remote areas. There is a wide range of indicators to show this. Summary indicators compiled by the ABS on the basis of 1991 Census statistics are shown in Table 6.

Rural and remote Australia is disadvantaged on the basis of all three indexes and, in general, this disadvantage increases with rurality. It is no coincidence that this mirrors almost exactly the pattern of health outcomes shown in Table 1 above.

Table 6 - Socio-economic Indicators

	Metropolitan		Rural			Remote	
	Capital cities	Other	Large Centres	Small Centres	Other	Centres	Other
Index of:							
Disadvantage	1018	986	981	968	999	975	949
Economic Resources	1041	996	970	956	947	983	905
Education/Occupation	1032	977	979	954	950	958	929

Source: AIHW 1998, p 9

Index is standardised to a national average of 1000, with an increase in the index representing a reduction in the degree of disadvantage.

Recommendation 1:

That recognition be given to the role that a lack of regional development plays in generating socio-economic disadvantage in rural and remote Australia and, in turn, the role that socio-economic disadvantage plays in causing poor health outcomes. Rural development, therefore, should be seen as relevant to improving health outcomes, as well as to other economic and social objective.

2.4 Health Services

The other major explanation for poorer health outcomes among rural and remote Australians is, of course, poorer access to health services. Relevant statistics are in Table 7, showing that

- capital city residents are some 40% more likely to see a GP in a year than are rural residents, and 95% more likely to see a GP than are remote residents
- capital city residents are some 60% more likely to see a specialist in a year than are rural residents, and 188% (nearly three times) more likely than are remote residents
- the density of community pharmacies is 18% greater in capital cities than in rural areas, and 122% (more than double) than in remote areas.

It is inconceivable for these inequalities in access to services to be unrelated to the poorer health outcomes achieved in rural and remote areas.

Table 7 - Health Service Access

	Metropolitan		Rural			Remote		Total
	Capital cities	Other	Large Centres	Small Centres	Other	Centres	Other	
MEDICARE GP CONSULTATIONS per 1,000 population								
Males	6404	5699	5003	4667	4095	3425	2798	5719
Females	8466	7646	6805	6516	5787	5082	4265	7711
MEDICARE SPECIALIST ETC CONSULTATIONS per 1,000 population								
Males	900	802	723	651	501	317	297	790
Females	1211	1023	899	844	645	449	415	1059
RETAIL PHARMACISTS per 100,000 population								
	62.5	57.7	62.9	57.3	46.1	33.9	24.4	58.6

Source: AIHW 1998, pp 86, 98,99.

Indicators of hospital and other health facility use are presented and discussed in the next chapter.

3 INFRASTRUCTURE ISSUES

3.1 Health Facilities

3.1.1 Hospitals

Table 8 provides information on the geographic distribution of hospital facilities.

Table 8 - Hospital Provision

	Metropolitan		Rural and remote			Total
	Capital cities	Other	Large Centres	Small Centres	Other	
HOSPITAL BEDS per 100,000 population						
Public	303	285	494	364	385	331
Private	154	139	241	76	26	132
Total	457	423	735	439	411	462
HOSPITAL EXPENDITURE PER BED, \$000						
Public	237.4	218.1	180.6	169.8	111.2	202.0
Private	127.7	120.6	114.9	90.5	58.9	122.1
Total	200.5	186.1	159.1	156.1	107.9	179.3

Source: AIHW 1998, pp 78,80.

The first thing that must be acknowledged about health facility infrastructure is the success public policy has had during the twentieth century of bringing hospitals to country towns. Public hospital beds are actually more available in rural and remote areas, particularly of course large rural centres but also in other areas, than in metropolitan areas.

It should be noted that this provision of hospital beds is in line with demand - with demand for hospital services also greater in rural, and particularly remote, areas compared with metropolitan areas. This reflects both the relative rural and remote health status and a greater proportion of in-patient admissions because of travel distances (AIHW 1998).

However, private hospital beds are much less equitably distributed, particularly for smaller centres and more remote areas. This raises the question of current policy directions encouraging a greater role for the private sector in health service delivery - given the maldistribution of private medical providers, such an increased role could be at the expense of generating even further inequality in access to health services and hence health outcomes.

Recommendation 2:

That measures to encourage private sector involvement in the health sector also include measures to ensure an equitable geographic provision of private sector services.

The other feature of Table 8 is, of course, that average expenditure per bed is greater in metropolitan than non-metropolitan hospitals, in both the public and private sectors. This largely reflects the different types of services provided in each region - particularly the provision of specialist services in large hospitals. It is important to note, therefore, that while the geographic distribution of hospital beds may be considered to be equitable, this does not necessarily mean that the geographic distribution of hospital services is equitable.

3.1.2 Aged Care Facilities

Table 9 shows the geographic distribution of aged care facilities.

Table 9 - Aged Care Facilities - Beds per 100,000 population aged 70 and over

	Metropolitan		Rural			Remote		Total
	Capital cities	Other	Large Centres	Small Centres	Other	Centres	Other	
Nursing home	440.3	419.5	497.0	388.8	293.3	204.7	78.8	409.7
Hostel	393.3	216.5	298.6	211.5	293.7	127.3	180.0	342.1

Source: AIHW 1998, p 92.

Metropolitan areas exceed the Government's target of 400 nursing home beds per 100,000 people aged over 70. Rural areas as a whole, however, are 9% below this target, and remote areas are 68% below the target.

For hostel accommodation, no area (at this level of aggregation) currently achieves the target of 500 places per 100,000 persons aged over 70. However, capital cities are 21% below this target, compared with 45% in rural areas and remote areas 68% below the target.

Recommendation 3:

That the Government seek to apply its targets for aged care facilities on an equitable geographic basis, implying a need for special measures to bring rural and remote provision of those facilities up to metropolitan levels.

3.2 Telecommunications Infrastructure

Rural telecommunications infrastructure has been a major focus of public policy in recent times. The Alliance has contributed to these deliberations in other publications (NRHA 1998a, NRHA 1998b), and offers the following comments in this context.

3.2.1 Telehealth

There is increasing interest in the application of communications technology to health service delivery, with a number of telehealth applications being trialed and applied. The central requirement for telehealth applications is adequate bandwidth to the premises concerned.

One of the more advanced telehealth systems in Australia (and, indeed, the world) is the Queensland Telemedicine Network. This initiative of Queensland Health consists of a video-conferencing link to 130 public health facilities around Queensland, with a further 70 sites planned to come online in coming months. The minimum bandwidth required to support video-conferencing is 128 kbps, the availability of which has been a limiting factor to the roll-out of the network. For many purposes, 384 kbps is required, which is a further limiting factor. This level of bandwidth supports the "talking heads" format required for purposes such as training, professional development, conducting meetings and main consultations such as in mental health. It also supports transmission of high resolution still images, suitable, for example, for radiological purposes. However, for high definition moving pictures, such as the ultrasound application demonstrated in the current Telstra advertisement, data rates of as much as 1 mbps are required - and only one location in the Network (Townsville) supports this rate of data transmission to Brisbane (Queensland Health 1999).

The most apparent benefit of the Network has been cost savings in relation to travel. For example, the delivery of services from major hospitals, such as in Brisbane or Townsville, direct to patients in their own locality reduces the need for patient transfers to those hospitals, with consequent savings in costs to the health system and in disruption to patients. The high-bandwidth ultrasound application shown in the Telstra advertisement costs around \$200 per hour - a very considerable saving compared with a trip from Townsville to Brisbane. Medium bandwidth applications cost very much less than this - perhaps \$60 per hour. Other benefits include training delivery, professional development and administration. Some more intangible benefits noted by those using the Network have included informal skills development among local practitioners, because local practitioners are involved in the consultations with specialists via the Network. Health outcome benefits for patients have been noted where, for example, usage of the Network for diagnostic purposes has assisted in earlier detection and hence treatment, and where patients are unable or unwilling to travel to the major hospital and hence would not have received specialist treatment at all without the Network (Queensland Health 1999).

As noted above, one barrier to the roll-out of such systems is the availability of the necessary bandwidth to health facility premises. Health facilities within 5 kms of a digital exchange would have little difficulty in gaining access to the ISDN technology necessary to support video-conferencing at least at 128 kbps; this would be the case in a

significant proportion of country towns. This may not, however, be the case in many remote communities - indeed, despite clear indications that Telstra was planning to digitise all of its exchanges, there remain some 70 analogue exchanges in the network (ACA 1998). Only the more significant regional centres would have access to the bandwidth necessary to support the more high-end telehealth applications.

This issue should appropriately be addressed by the National Bandwidth Inquiry (Alston 1998). Every community of sufficient size to support any sort of health facility should have access to the necessary bandwidth to support a telehealth application requiring at least 128 kbps.

Recommendation 4:

That the National Bandwidth Inquiry establish a goal of sufficient bandwidth to support a telehealth application requiring 128 kbps to be available to every community with a physical health facility. The Inquiry should assess the extent to which this goal is not met at present and the extent to which USO and other initiatives will achieve the goal, establish a time frame for achievement of this goal, and necessary policy mechanisms and monitoring arrangements to ensure its achievement.

Funding arrangements are also a barrier to telehealth applications. In particular, Medicare rebates are only available for consultations where the practitioner is physically present, although the Federal Minister has indicated that this will soon change for telepsychiatry. The continued absence of Medicare rebates will limit telehealth applications to public sector environments.

Recommendation 5:

That reforms to health funding arrangements to remove barriers to new infrastructure developments in the form of telehealth networks be investigated.

Other issues in telehealth include the challenges to organisations involved in re-engineering their operations to support such applications, and questions such as patient and practitioner attitudes.

NRHA believes that the potential for telehealth applications to improve health service delivery to rural and remote Australians must be exploited to its maximum. **This must not, however, be at the expense of existing services.** Rather, telehealth should be seen as a way of enhancing health outcomes, with any cost savings accrued in this manner, rather than through a withdrawal of services.

An Australian New Zealand Telehealth Committee has been formed under the auspices of the Australian Health Minister's Advisory Council (AHMAC). The Committee's Terms of Reference are:

1. To consider and discuss issues arising out of the implementation of Telehealth and Telehealth services across Australia with a view to developing policies or positions to submit to the AHMAC Telehealth working party.
2. To report on the implementation and evaluation of Telehealth projects in each State and Territory.
3. To disseminate information on the development, implementation and evaluation of Telehealth and Telehealth projects nationally.
4. To examine the issues arising from the development and implementation of international Telehealth and Telehealth services.
5. To consider the need to develop a national Telehealth or Telehealth strategy to be implemented by the Commonwealth with the agreement of all States and Territories.
6. To communicate with all interest groups involved in Telehealth so as to ensure a representative consideration of views and opinions in the development and implementation of any policies or national strategy.

The Committee issued a report in January 1998, which included a number of recommendations including for trial projects, evaluations etc (Australian New Zealand Telehealth Committee Web site).

Similarly, "unlocking the potential of the health sector" was one of the strategic priorities identified in the 1998 *Strategic Framework for the Information Economy*, which included a statement that

"The Commonwealth Government is committed to:

1. *The use of information and communications technology to achieve better health for all Australians, and to enable Australia to benefit from the export of health services.*
2. *The development of a comprehensive health sector strategy, encompassing policies to ensure the necessary infrastructure, skills and legal and regulatory frameworks to achieve enhanced outcomes."* (NOIE 1998)

This overdue evidence of some national leadership on the issue is welcome.

Recommendation 6:

That the proposed comprehensive health strategy, part of the 1998 *Strategic Framework for the Information Economy*, should provide real national leadership to the development of telehealth applications and the provision of the required infrastructure.

3.2.2 General Telecommunications Issues

The potential for communications technologies to improve the lives of rural and remote residents goes beyond health services, of course. There is enormous potential in areas such as education, electronic commerce and the provision of public services, as well as the potential of these technologies to help overcome social and geographic isolation. On the other side of the coin, there is a risk that rural and remote communities could be left behind if they do not have access to, and make appropriate use of, these technologies.

For this potential to be realised, however, there has to be sufficient bandwidth into individual residences - not just into communities.

Evidence given by Telstra to the 1998 Digital Data Inquiry exposed for the first time just how inadequate rural and remote telephone lines are for supporting modern communications systems. Table 10 reproduces this evidence.

Table 10 - Telephone Line Data Transmission Rates

	Number of Subscribers	At least 2.4 kbps	At least 9.6 kbps	At least 14.4 kbps	At least 28.8 kbps
Urban and Provincial (a)	5,747,100	99	95	85	60
Rural	587,820	99	70	45	30

Footnote: (a) In Telstra's nomenclature, "urban and provincial" includes major rural centres.

Source: ACA 1998 pp 55-56.

Basically, voice telephony requires a transmission rate of at least 2.4 kbps, and hence this is the level mandated under the universal service obligations (USO). A data transmission rate of 9.6 kbps is required to make satisfactory use of text-based communications such as facsimile and email, a transmission rate of 14.4 kbps is the bare minimum for any degree of satisfactory access to the World Wide Web, and a rate of 28.8 kbps is required for taking advantage of the multi-media capabilities of the World Wide Web.

On the basis of Telstra's own figures, therefore, 30% of rural and remote telephone subscribers have telephone lines of insufficient quality for satisfactory access to even simple text-based communications, and over half cannot satisfactorily access the World Wide Web. It is recognised that these figures are improving with initiatives such as exchange digitisation and upgrades to systems including the Digital Radio Concentrator System. Nevertheless, these improvements are painfully slow in terms of the scale of the problem.

Moreover, slow line speeds are not the only difficulty experienced by rural and remote residents. Other problems include noisy lines and call drop-outs, as well as delays in gaining connection or fault repair. For example, around 20% of farm households report experiencing such problems "frequently"; among farm Internet users the figure is nearly 40% (Pattinson 1998).

Policy focus to date has been on the provision of a digital data capability, that is, an ISDN or equivalent connection providing at least 64 kbps transmission rates. The Alliance notes the outcome of these deliberations in the form of a USO provision of such a capability for 96% of the population, and a subsidy for the purchase of necessary satellite equipment for the remaining 4%.

These provisions, once enacted, go a long way to satisfying the needs of those willing and able to pay for ISDN capability. However, this is only a very small proportion of households. ISDN capability is not sought by most urban Australians, and so there is little need to assume that it would be sought by many rural and remote Australians. From the point of view of most rural and remote residents, the real purpose of seeking a digital data capability would have been the effect that would have had on improving the quality of telephone lines generally, but this purpose tended to be lost in the detailed deliberations on this matter.

In the Alliance's view, it is now time to re-focus attention on the real problem, viz, poor quality telephone lines. The Alliance accepts that for many people, the solution to this problem will involve a technology other than their existing system - satellite being one of the more promising prospects - and hence that policy measures should be technology-neutral.

One vehicle already adopted by the Government is the adoption of a Customer Service Guarantee, which imposes certain requirements on carriers such as Telstra in areas such as customer service, fault correction etc. A noticeable omission from this Guarantee, however, is any guarantee on quality of phone lines (other than the basic telephony level explicit in the USO).

Recommendation 7:

That further policy initiatives be undertaken to directly improve the quality of rural and remote telephone lines. These initiatives should include an explicit plan for progressive upgrading of the quality of lines, on a "worst first" basis, against measurable and enforceable targets. Possible mechanisms for enforcement could include the Universal Service Obligation arrangements and/or the Customer Service Guarantee arrangements.

Finally, it hardly needs drawing to this Committee's attention the concerns of rural and remote residents about the implications of Telstra privatisation for communication services to their areas. It is a very legitimate concern that a privatised organisation whose main responsibility is a return on shareholders' funds will increasingly direct resources - capital, management and entrepreneurial - to more potentially profitable urban areas than to rural and remote areas.

Even without further privatisation of Telstra, there is clearly a need to re-focus management attention on rural and remote service provision. The current level of such attention appears to be a temporary phenomenon inspired more by the politics of privatisation than by any fundamental commitment. There is a limit to how far external

sanctions such as Customer Service Guarantees can go in this direction, particularly in an industry as subject to rapid innovation as telecommunications. Market-based initiatives, such as tendering out the USO, are a useful addition to policy in this area. It remains the view of many rural and remote residents, however, that more detailed policy intervention into Telstra decision-making of the type that is only possible under public ownership is still required.

3.3 Transport Infrastructure

Transport has a pervasive effect on access to services and on overall quality of life in rural and remote areas. As acknowledged in the 1994/1996 National Rural Health Strategy, "Adequate transport and communications remain imperatives in delivering effective health care throughout rural and remote Australia and in ensuring access of rural and remote inhabitants to services".

Similarly, the 1999 *Healthy Horizons* Framework for Improving the Health of Rural, Regional and Remote Australians document said that "the ability to get where you need to go ... is fundamental.... For those who do not drive or own a car, life in rural, regional and remote areas can be hard."

The transport situation has become worse for some people, particularly those who are not well off due to unemployment or other causes of low income. Public transport services within rural and remote areas, and between them and major regional centres and capital cities, have continued to be 'rationalised'. In many isolated areas there are only bus services on intermittent days or air services which are very expensive for private individuals. Country fuel prices remain high.

For these reasons transport is identified surprisingly frequently by patients and consumer advocates as the number one priority with respect to access to health services. This is not sufficiently well recognised by funders and policy makers.

There is a lack of co-ordination of the public transport services that do exist, leading to ineffectiveness and insufficient flexibility to deal with local transport problems.

There are some positive community activities in transport in rural areas, including for health purposes. However there are difficulties with the recruitment, training and support of drivers of community vehicles, many of whom are volunteers.

There is also difficulty in obtaining and servicing vehicles, even in the public sector, particularly when they are used extensively on dirt roads and when the people using them are expected to maintain the vehicles themselves.

Allied health, dental and other non-medical services are not covered by Patient Assistance Travel Schemes (PATs, titled Isolated Patients' Travel and Accommodation Schemes, IPTAAS, in some jurisdictions).

The administrative and regulatory details of these patient assistance schemes vary across States and the Northern Territory. There are or have been recent reviews of these

Schemes in some health jurisdictions but, given the importance of the matter, an overall national review is necessary and should be undertaken as a matter of urgency.

The high cost and scarcity of transport also affect health through their impact on the cost of all goods and the quality of perishable items in more remote areas. Fresh food at affordable prices is an important input to good health, but in remote communities a cabbage may cost \$5.00 and two litres of fresh milk \$8.00.

Given the importance of the issue, State, Territory and Commonwealth governments should give a higher priority to the allocation of resources for operational and capital funding of health transport services, especially those provided for outreach and other mobile services.

There needs to be sufficient standardisation of policies in relation to PATS/IPTAAS to ensure equity, flexibility and efficiency. Specific issues to be considered include eligibility criteria, escorts, return travel, cross-border issues, pre-payment, and access to allied health and other non-medical professions. This standardisation could be accomplished through AHMAC and the Health Ministers' Council.

Appropriate funding should be allocated in health budgets to hospitals and health services in rural and remote regions to ensure that they engage in good discharge planning. These resources should also be used to provide appropriate support for people returning home, especially when they have a long distance to travel.

The case for giving a higher priority to rural and remote transport services would be strengthened by an analysis of the comparative levels of subsidy of public transport in urban, rural and remote areas. Such a study should be commissioned by the Commonwealth Government (NRHA 1997).

Recommendation 8:

That health planning should take more cognisance of transport issues, and transport planning of health needs. In particular

- **the PATS/IPTAAS schemes should be reviewed, particularly in relation to eligibility criteria, escorts, return travel, cross-border issues, pre-payment, and access to allied health and other non-medical professions**
- **health transport services should receive higher priority in health funding arrangements, including discharge arrangements for people returning home.**

3.4 Water and Other Public Health Infrastructure

It would be remiss of this Submission - and of the Committee's work - if the issue of remote community infrastructure were not addressed. Deficiencies in basic public health infrastructure such as water supplies are a major cause of the appalling health outcomes among indigenous Australians.

In particular:

- numerous studies have established and measured the infrastructure needs of remote and indigenous communities. What is now required is a set of practical policy measures to address them.
- in indigenous communities there is strong need for community participation and control, from which comes the potential for local employment and training benefits
- the often mundane, and even tedious, dirty and often dangerous work involved
- retaining an outcomes focus. The purpose of public health infrastructure work is to improve health outcomes, with physical assets and their costs only a means to that end
- contrary to popular perceptions, improvements in health infrastructure in remote communities is achievable. There are programs in place that do work - what is required is more resources and more application of the positive lessons that have been learnt
- perhaps most fundamentally of all, those successful programs show that Aboriginal people are not the culprits. With active primary health care services and better initial design/construction, the ongoing maintenance needed to sustain a healthy living environment is reduced to a point where it can largely be managed by local Aboriginal people (Pholeros 1999).

Recommendation 9:

That positive recognition be given of the need for improved public health infrastructure in remote Aboriginal communities, and of the proven role of community-based approaches to address public health and related problems in those communities.

4 APPROACH TO RURAL DEVELOPMENT

In recognition of the strong link between rural development and improved rural and remote health outcomes, the Alliance last year published a Discussion Paper entitled *A Blueprint for Rural Development* (NRHA 1998c). The following is a brief summary of that paper.

The focus on rural affairs in Australia during 1998 has highlighted an opportunity that has long existed: to develop non-metropolitan parts of the nation in ways which are in the national interest and which are quite different from the current ways.

Rural development is joint action by communities and governments to improve the well-being and conditions of people living and working in non-metropolitan areas. Rural development is in the national interest and it affects health. Rural development is a health issue. Without it there are declining communities, with little sense of direction, an uncertain future and poorly motivated leaders. These result in poor health directly through the stress, frustration, and alienation that people feel. They also result in poor health indirectly through the difficulty for governments and the private sector of providing health services to areas that have small, sparse or declining populations.

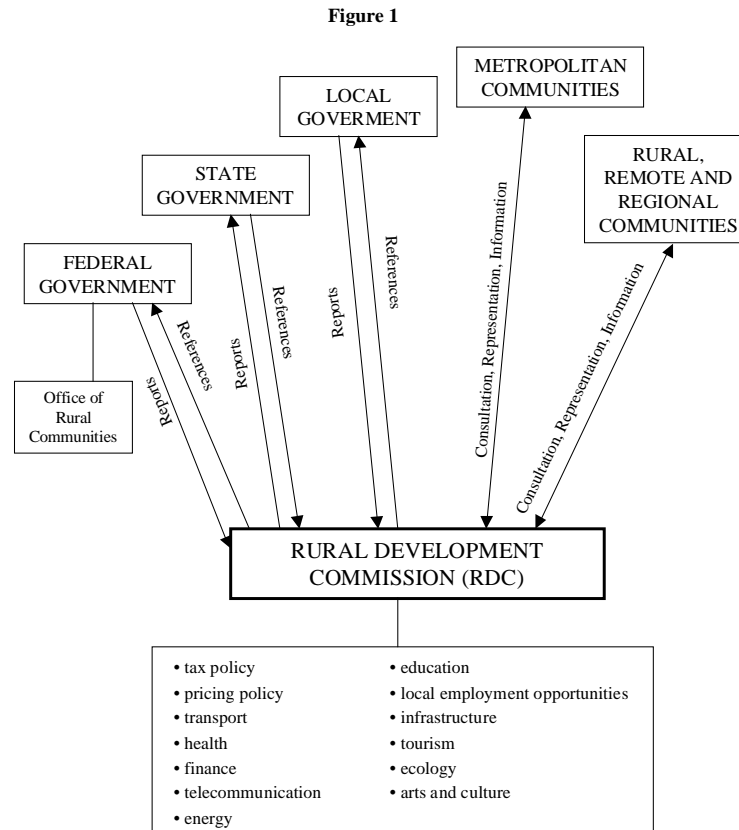
Rural and regional development policies that currently exist are not maximising the potential of non-metropolitan communities and industries. This means that the nation as a whole and rural people in particular are missing out on income and quality of life that could be theirs.

The key proposal is that a Rural Development Commission (RDC) be established. Given the need to integrate the policies of the three levels of government, it is intended that the RDC be uniquely positioned with respect to Federal, State and local Government. The relationship of the RDC to governments and communities is summarised in Figure 1.

The business of rural development is complex. As well as the efforts of rural communities themselves, it potentially involves many of the major systems of the Australian economy and society. In particular it involves the taxation system, pricing policies of public and private utilities, and policies and programs of a number of key sectors. These include the transport, health, finance, telecommunications, energy, education, infrastructure, tourism, ecology and arts sectors.

There has been much work in Australia about how the nation and its non-metropolitan communities can find ecological, social and economic sustainability. The challenge is to translate such work into good policies and programs. However, the emphasis on a Rural Development Commission should not be seen as giving governments a pre-eminent place in the future of rural communities. The proper roles of government are critical but, overall, they should facilitate community effort, not replace it. Governments cannot and should not fix the rural development challenge on their own.

Overall the Rural Development Commission would take the lead in national development and application of a new approach to regional and rural development in Australia. It would develop explicitly interventionist approaches to rural development, justified on the basis of the costs of urban development, and benefits of rural development, that are not taken into account in narrow cost-benefit analyses.



The main areas for the development of specific policies would include the following

- taxation, including
 - options for carbon taxes and credits, polluter-pays systems and environmental taxes
 - a restructure of the taxation system to give 'relative incentive' to rural businesses, services and settlement
- service and commodity pricing policies
- transport policies for rural and metropolitan areas, including fuel pricing/taxation arrangements
- the operation of Community Service Guarantees in the commercial and government sectors
- rural and remote health issues
- telecommunications
- in relation to health, education and transport (as well as telecommunications), extension of the application of Community Service Guarantees

- local employment initiatives
- infrastructure development and maintenance
- national and international tourism. An example in this area would be a new network of public trails and wildlife corridors
- 'regional development policies' in Australia and overseas
- energy policy, including on alternative sources of energy
- intergovernment relations, such as work on cross-border issues and development of uniform standards
- the finance sector, such as extension of local financial institutions including co-operatives, credit unions and banks
- the arts and culture
- indigenous affairs
- how to improve 'food security' in remote areas
- ecological programs in Australia, including feral animals
- rural social policy, including as it relates to young people, women and the elderly
- Regional Development Corridors

Recommendation 10:

A Rural Development Commission be created, to work on developing policies in a wide range of areas to stimulate rural development, in conjunction with all levels of Government and local communities.

5 LIST OF RECOMMENDATIONS

Recommendation 1:

That recognition be given to the role that a lack of regional development plays in generating socio-economic disadvantage in rural and remote Australia, and, in turn, the role that socio-economic disadvantage plays in causing poor health outcomes. Rural development, therefore, should be seen as relevant to improving health outcomes, as well as to other economic and social objective.

Recommendation 2:

That measures to encourage private sector involvement in the health sector also include measures to ensure an equitable geographic provision of private sector services.

Recommendation 3:

That the Government seek to apply its targets for aged care facilities on an equitable geographic basis, implying a need for special measures to bring rural and remote provision of those facilities up to metropolitan levels.

Recommendation 4:

That the National Bandwidth Inquiry establish a goal of sufficient bandwidth to support a telehealth application requiring 128 kbps to be available to every community with a physical health facility. The Inquiry should assess the extent to which this goal is not met at present and the extent to which USO and other initiatives will achieve the goal, establish a time frame for achievement of this goal, and necessary policy mechanisms and monitoring arrangements to ensure its achievement.

Recommendation 5:

That reforms to health funding arrangements to remove barriers to new infrastructure developments in the form of telehealth networks be investigated.

Recommendation 6:

That the proposed comprehensive health strategy, part of the 1998 *Strategic Framework for the Information Economy*, should provide real national leadership to the development of telehealth applications and the provision of the required infrastructure.

Recommendation 7:

That further policy initiatives be undertaken to directly improve the quality of rural and remote telephone lines. These initiatives should include an explicit plan for progressive upgrading of the quality of lines, on a "worst first" basis, against measurable and enforceable targets. Possible mechanisms for enforcement could include the Universal Service Obligation arrangements and/or the Customer Service Guarantee arrangements.

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