

Rural Health

Challenges of Distance Opportunities for Innovation



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- service providers and rural community representatives who gave their time to host the visits to the four District Health Board (DHB) areas Northland, West Coast, Tairāwhiti and Waikato
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- the New Zealand Rural General Practice Network
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- the Ministry of Social Development, Family and Community Services, Integrated Contract Team
- Health Care Aotearoa
- those people who provide health and disability services in rural communities, sometimes unheralded, on a paid or voluntary basis.

National Advisory Committee on Health and Disability Members

The members of the National Advisory Committee on Health and Disability who worked on this project were:

- | | |
|---|--|
| • Phil Shoemack (lead project sponsor) | • William Taylor |
| • Linda Holloway (NHC Chair until September 2009) | • Carmel Peteru (until September 2009) |
| • Maaka Tibble (project sponsor) | • Sheila Williams |
| • Robin Kearns (project sponsor) | • Gwen Tepania-Palmer (project sponsor until 2007) |
| • Kitty Chiu (project sponsor) | • Geoff Fougere (project sponsor until 2008) |
| • Dale Bramley (project sponsor) | • Api Talemaitoga (until 2008) |
| • Pauline Barnett (interim NHC Chair) | • Riripeti Haretuku (until 2008) |
| • Te Kani Kingi | |

The National Advisory Committee on Health and Disability is a statutory body that provides independent advice to the Minister of Health on the priorities for health and disability support services that should be publicly funded.

The views expressed in this report belong to the National Advisory Committee on Health and Disability, as does responsibility for any errors or omissions.

Message from the Chair

Living in rural New Zealand today has advantages and disadvantages. The landscape offers spectacular scenery and the possibility for an active lifestyle. However, other factors can make rural living difficult. This report examines the very real challenges faced in delivering sustainable comprehensive health services to rural communities.

The release of this report is timely because it coincides with the initiation of the Ministry of Health's work with the Rural General Practitioners' Network as part of the Government's priorities in primary health care. In addition to this, the Ministerial Review Group's report *Meeting the Challenge*, released in August 2009, recommends wide-ranging changes to the health sector.¹ These recommendations are under consideration. The Government has set the direction for 'better, sooner, more convenient' health services delivery.² This includes further devolution of some services located in hospitals to primary health care settings and establishing Integrated Family Health Centres (IFHC) to incorporate broad multidisciplinary primary health care teams. The National Health Committee (NHC) proposes that at least one IFHC be established in a rural setting.

During the NHC's visits to rural communities (conducted as part of the Rural Communities and Health Project and in preparation of this report), the NHC observed a high degree of commitment from organisations and individuals delivering health care to rural populations. The effectiveness of these services is due in part to the high level of local participation in the governance of services. Maintaining and ensuring the sustainability of local initiatives will be important. The many local initiatives identified during the NHC's work illustrate how rural communities can lead the way when given appropriate support.

This NHC report supports the aspirations outlined in the Ministry of Health's *Statement of Intent 2009–2012*,³ including:

- designing services that are more attuned to the needs of patients, individuals, families and communities
- facilitating positive and adaptive relationships with whānau and recognising the interconnectedness of health, education, housing, justice, welfare, employment and lifestyle elements of whānau wellbeing.

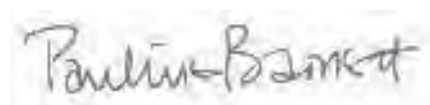
¹ Ministerial Review Group. 2009. *Meeting the Challenge*. Wellington: Ministerial Review Group. <http://beehive.govt.nz/sites/all/files/MRG%20Report%20Meeting%20the%20Challenge.pdf>.

² Ryall T (Member of Parliament and National Party spokesperson), with the National Party's Health Team. 2007. *Better, Sooner, More Convenient*. Health discussion paper. Wellington: Office of the Leader of the Opposition.

³ Ministry of Health. 2009. *Statement of Intent 2009–2012*. Wellington: Ministry of Health.

In affirming these aspirations, this report outlines the health and health service challenges facing rural communities. The report provides recommendations that the NHC believes will make a lasting difference to the health of people living in rural communities.

Rural New Zealand is diverse, so a diversity of health care models need to be adopted and sustained. A careful balance is required with a strong role for central government in fostering supportive environments and a need for policies that encourage creativity and affirm self-determination.

A handwritten signature in dark ink, reading "Pauline Barnett". The signature is written in a cursive, flowing style.

Pauline Barnett, Interim NHC Chair

Contents

Acknowledgements	iii
National Advisory Committee on Health and Disability Members	iii
Message from the Chair	v
Purpose of this report	ix
Executive summary	x
Recommendations	xiv
Rural Communities and Health Project	1
About the Rural Communities and Health Project	1
Definition of 'rural'	2
What the National Health Committee found	5
Challenges for rural health and disability service delivery	5
Current work addressing the challenges of rural health and disability service delivery	8
Factors influencing health and disability service delivery in rural areas	9
Implementing the National Health Committee's recommendations	11
Improve service delivery	11
Improve system performance	19
Improve the use of technology	29
Improve public health	31
Improve planning, data collection and research	33
Appendices	
Appendix 1: Development of New Zealand health services from 1840 to 1999 and their impact on rural areas	41
Appendix 2: Features of rural New Zealand	49
Appendix 3: Life expectancy and health status	64
Appendix 4: The future of rural health	75
Appendix 5: Demographics of District Health Board areas visited	84
Appendix 6: National Health Committee consultation visits to District Health Board areas	94
Appendix 7: Statistics New Zealand's Urban/Rural Profile explained	101
Glossary	104

List of Tables

Table 1:	Population density, deprivation and gender ratio	53
Table 2:	Population by Urban/Rural Profile, 1996–2026	55
Table 3:	Life expectancy at birth and age 65 for urban and rural populations by sex, 2005–2007	65
Table 4:	Life expectancy at birth and age 65 for urban and rural Māori by sex, 2005–2007	66
Table 5:	Age-standardised health services and outcomes	67
Table 6:	Age-standardised health services and outcomes by urban and rural areas	68
Table 7:	Demographic profiles of District Health Boards the National Health Committee visited	84

List of Figures

Figure 1:	Urban/Rural Profile categories for the North Island, New Zealand, 2006	3
Figure 2:	Urban/Rural Profile categories for the South Island, New Zealand, 2006	4
Figure 3:	Age distributions in urban and rural areas, 2006	56
Figure 4:	Māori and non-Māori age distribution, main urban areas, 2006	58
Figure 5:	Māori and non-Māori age distribution, rural areas with low urban influence, 2006	58
Figure 6:	Area deprivation by rurality (2006 New Zealand Index of Deprivation)	60
Figure 7:	Deprivation by Urban/Rural Profile: Māori as a proportion of all residents in named quintile in Urban/Rural Profile	61
Figure 8:	Three-year moving average age-standardised rates of suicide for males and females by binary urban/rural status, 1981–2001	70
Figure 9:	Rural adjuster funding per capita and District Health Board population, 2004	83
Figure 10:	Urban/Rural Profile, Northland District Health Board	86
Figure 11:	Areas of highest socioeconomic deprivation, Northland District Health Board	87
Figure 12:	Urban/Rural Profile, Waikato District Health Board	88
Figure 13:	Areas of highest socioeconomic deprivation, Waikato District Health Board	89
Figure 14:	Urban/Rural Profile, Tairāwhiti District Health Board	90
Figure 15:	Areas of highest socioeconomic deprivation, Tairāwhiti District Health Board	91
Figure 16:	Urban/Rural Profile, West Coast District Health Board	92
Figure 17:	Areas of highest socioeconomic deprivation, West Coast District Health Board	93

Purpose of this report

This report describes the National Health Committee's (known as the National Health Committee or NHC's) findings from its Rural Communities and Health Project. The NHC believes implementing the recommendations in this report will make a lasting difference to the health of people living in rural communities.

Some recommendations require the Minister of Health to direct the Ministry of Health to implement them. Others require the Ministry of Health, District Health Boards and Primary Health Organisations to work together. A few recommendations require the Minister of Health and the Ministry of Health to work with other Ministers and ministries.

Detailed actions related to each recommendation and examples of local initiatives are provided to help inform how the recommendations can be implemented.

Background information the NHC gathered to inform its deliberations and thinking is summarised in seven appendices.

Key terms are described in the Glossary at the end of the report.

Executive summary

Protect and improve rural New Zealand communities' health

Rural Health: Challenges of distance, opportunities for innovation focuses on how to protect and improve the health status of rural New Zealand communities. To achieve this goal, the report suggests ways of improving the delivery of rural health and disability services. The report also provides direction to ensure that the promise of new opportunities is sustained for rural communities, particularly those with the poorest health outcomes and access to services. In this report, the National Health Committee (NHC) highlights both the challenges that distance creates for health service delivery and the opportunities for innovation that exist in rural communities.

Gaps in life expectancy between different subpopulations

In considering the health of rural communities, the NHC found that life expectancy and other measures of health status are similar for rural and urban populations overall. The gap between Māori and non-Māori life expectancy is present in both rural and urban areas. Rural Māori have a slightly shorter life expectancy than urban Māori.

Rural communities concerned about access to health services

The NHC's consultation with rural communities revealed their concern about access to health services. However, local communities and service providers were willing to explore new service models to meet local needs. In this way, some rural areas are leaders in service development in an era of limited resources.

Mitigating the barriers to health services

The NHC identified a variety of factors that might impede people's access to health and disability services in rural areas. These factors include socioeconomic deprivation, geographical barriers and distance, transport, telecommunications, the cost of accessing services, and service acceptability.

As a result of the information the NHC gathered, it concluded that to enable better and more appropriate service delivery more emphasis is needed on providing:

- rural communities with comprehensive primary health care
- supportive technology (medical and non-medical)
- visiting services and transport support
- supportive business models
- community governance
- increased scopes of practice
- flexible, sustainable and efficient contract and funding arrangements.

Rural communities are developing creative solutions

The NHC acknowledges the initiative, drive and determination of rural communities to find creative solutions to difficult challenges. Local communities have their own resilience and coping strategies that should be considered seriously in planning and policy development.⁴ Existing rural partnerships, collaborative approaches and networks highlight how resources can be shared, capacity can be improved, and new models of care can be established to make it easier for rural people to access services.

Importance of whānau ora

The NHC believes whānau ora⁵ provides an opportunity to improve the health status of Māori in rural areas. It is the NHC's view that primary health care providers should be supported to deliver services that enhance whānau ora and that all providers should be accessible to Māori and work in culturally appropriate ways.

⁴ See, for example, Ministry of Civil Defence and Emergency Management. 2009. *Tephra: Community resilience – Research, planning and civil defence emergency management* 22 (July).

⁵ Whānau ora involves 'facilitating positive and adaptive relationships within whānau and recognising the interconnectedness of health, education, housing, justice, welfare, employment and lifestyle as elements of whānau wellbeing': Ministry of Health. 2009. *Statement of Intent 2009–2012*. Wellington: Ministry of Health. p 17.

Recommendations to improve three areas

The NHC asks the Minister of Health to consider the 10 recommendations in this report. These recommendations are in line with the Ministry of Health's *Statement of Intent 2009–2012*⁶ and the aim of delivering 'better, sooner, more convenient' health services.⁷

The recommendations outlined in this report come under three areas for improvement:

- service delivery
- system performance
- planning, data collection and research.

For each recommendation, the NHC has developed suggested actions (summarised below).

Service delivery

The key actions to improve service delivery are to:

- provide services locally through outreach clinics and use technology to enable general practitioners to undertake an extended range of services
- encourage the development of nurse-led clinics and support extended scopes of practice for paramedics
- allow transport subsidies to be claimed for the first visit to a specialist (for example, when a primary health care provider refers a patient for assessment)
- establish as soon as possible, at least one Integrated Family Health Centre in a location convenient for rural patients.

System performance

The key actions to improve system performance are for the Ministry of Health to:

- encourage the use of alternative ownership models such as trusts, or combine resources between a District Health Board and Primary Health Organisation to provide sustainable primary health care in rural areas
- integrate health funding streams to ensure more efficient administration of funding within fewer overall contracts
- work with the Integrated Contracting Team in the Ministry of Social Development to develop integrated contracts across health, disability and social services

⁶ Ministry of Health. 2009. *Statement of Intent 2009–2012*. Wellington: Ministry of Health.

⁷ Ryall T (Member of Parliament and National Party spokesperson), with the National Party's Health Team. 2007. *Better, Sooner, More Convenient*. Health discussion paper. Wellington: Office of the Leader of the Opposition.

- ensure the Māori Innovation Fund provides funding for initiatives targeting rural Māori and continue to support the Māori Provider Development Scheme and rural Māori health providers.

Planning, data collection and research

The key actions to improve planning, data collection and research are to:

- combine resources across District Health Boards where appropriate to provide efficient and effective rural health and disability services
- adopt the use of Statistics New Zealand Urban/Rural Profile⁸ across the health and disability sector
- develop a set of rural New Zealand health status indicators.

Outcome of the recommendations and associated actions

The NHC believes the recommendations and actions outlined in this report will help to further the Government's aim of delivering better, sooner, more convenient health services. The focus on primary health care offers an opportunity to address the challenges that distance poses to rural communities' access to health services.

Responsibility for implementing recommendations

Several of the recommendations span government portfolios other than health. Therefore, the NHC suggests the Minister of Health work with his Cabinet colleagues to establish cross-departmental agreements to improve rural health outcomes.

The NHC believes there should be clear responsibility for oversight of rural health and disability services within the Ministry of Health at a national level.

Finally, the NHC proposes the Minister of Health direct the Ministry of Health to report back within one year on the progress made against the recommendations and suggested actions outlined in this report.

⁸ See Statistics New Zealand. No date. Defining Urban and Rural New Zealand. www.stats.govt.nz/Publications/BusinessPerformanceEnergyAndAgriculture/urban-rural-profile/defining-urban-rural-nz.aspx.

Recommendations

To maintain and improve the health and wellbeing of people living in rural New Zealand the National Health Committee asks the Minister of Health to consider the following 10 recommendations.⁹

Improve service delivery

1. Improve the delivery of primary health care to rural New Zealanders by:
 - 1.1 ensuring future developments in primary health care give specific consideration to improving access for rural populations especially those who face the greatest barriers to accessing services
 - 1.2 improving travel assistance, including:
 - 1.2.1 reviewing the National Travel Assistance Policy so rural people can claim travel expenses to attend any health service appointment that is beyond the agreed threshold distance from their home¹⁰
 - 1.2.2 making it easier for people to travel to services, with a particular emphasis on people with disabilities and older people^{11,12}
 - 1.2.3 making it easier for services (including first response services) to get to people, especially people with disabilities and older people.¹³

Improve system performance

2. Improve rural capacity by encouraging the use of alternative business models, fostering partnerships and supporting training in health service governance.
3. Improve funding arrangements and reduce contract transaction costs by having fewer funding streams and encouraging greater use of integrated contracts.

⁹ Some recommendations require the Minister of Health to direct the Ministry of Health to implement the recommendations. Others require the Ministry of Health, District Health Boards and Primary Health Organisations to work together. A few recommendations require the Minister of Health and Ministry of Health to work with other Ministers and ministries. Further details are provided in the tables that outline the suggested actions related to each recommendation.

¹⁰ Ministry of Health. 2005. *National Travel Assistance Policy*. Wellington: Ministry of Health.

¹¹ Minister for Disability Issues. 2001. *New Zealand Disability Strategy: Making a world of difference – Whakanui oranga*. Wellington: Ministry of Health. Objective 8.

¹² Minister for Senior Citizens. 2001. *New Zealand Positive Ageing Strategy: Towards a society for all ages – He anga oranga kau mō ngā whakatipuranga katoa*. Wellington: Ministry of Social Policy. Goal 7.

¹³ In particular, people living in areas defined as Remote Areas or Rural Areas with Low Urban Influence. See the Statistics New Zealand classification of rurality in its Urban/Rural Profile in Appendix 7.

4. Support primary health care providers to deliver services that enhance whānau ora, and ensure all providers are accessible to Māori and work in culturally appropriate ways.
5. Work with businesses and other government agencies to improve the availability of technology, including cell phone coverage, the provision of high-speed internet access, telemedicine capability, and other health service technologies in and for rural communities.
6. Work with other central and local government agencies to improve public health infrastructure such as the quality of housing, drinking water, and sewage and waste disposal in rural communities.

Improve planning, data collection and research

7. Adopt the Statistics New Zealand Urban/Rural Profile classification system¹⁴ across the health sector to describe rurality to enable consistent information gathering, planning and allocation of funding.¹⁵
8. Improve the planning of rural health and disability services by working across district and regional boundaries.
9. Require District Health Boards as part of their regular needs assessment to assess the health needs of their rural communities and the responsiveness of services within their districts. Explicit assessment of health needs should include the whole rural population as well as a focus on:
 - 9.1 the needs of rural Māori
 - 9.2 the disability-related needs of rural communities
 - 9.3 the needs of communities in areas with high socioeconomic deprivation¹⁶
 - 9.4 the needs of communities in highly rural/remote areas.¹⁷
10. Support and fund ongoing research to develop an evidence base to inform the improvement of rural health and disability services.

Detailed actions about how each recommendation could be implemented and examples of local initiatives are in the section 'Implementing the NHC's recommendations'.

¹⁴ See Statistics New Zealand. No date. *Defining Urban and Rural New Zealand*. www.stats.govt.nz/Publications/BusinessPerformanceEnergyAndAgriculture/urban-rural-profile/defining-urban-rural-nz.aspx.

¹⁵ Statistics New Zealand. 2006. *New Zealand: An Urban/Rural Profile*, Wellington: Statistics New Zealand.

¹⁶ Salmond C, Crampton P. 2008. *NZDep2001 Index of Deprivation*. Wellington: Department of Public Health and School of Medicine.

¹⁷ See Appendix 7.

The background information the NHC gathered to inform its deliberations and thinking is outlined in the appendices. These are:

- Appendix 1: Development of New Zealand health services from 1840 to 1999 and their impact on rural areas
- Appendix 2: Features of rural New Zealand
- Appendix 3: Life expectancy and health status
- Appendix 4: The future of rural health
- Appendix 5: Demographics of District Health Board areas visited
- Appendix 6: National Health Committee consultation visits to District Health Board areas
- Appendix 7: Statistics New Zealand's Urban/Rural Profile explained.

Rural Communities and Health Project

The goal of the National Health Committee's (NHC's) Rural Communities and Health Project is to protect and improve the health status of rural New Zealanders and to improve the delivery of health services to rural communities. This section describes the background to the project, the definitions used in the project, and how the NHC gathered and collated the information for this project. (Key terms are described in the Glossary at the end of the report.)

About the Rural Communities and Health Project

Through its visits to District Health Boards (DHBs) over several years, the NHC became increasingly aware of the challenges for co-ordinating and delivering health and disability services for rural communities. The NHC also noticed the variety of local rural initiatives that could be useful to others delivering health and disability services. These observations led to a project, the Rural Communities and Health Project, to explore the challenges rural communities faced and identify possible solutions to those challenges.

The project included:

- visits to four DHB areas (Northland, West Coast, Tairāwhiti and Waikato), which illustrate the diversity of rural New Zealand, and interviews with a variety of organisations, providers, networks and groups
- a rural health literature review¹⁸
- an historical overview of the development of health services in rural New Zealand
- an examination of demographics and health status in rural areas
- a review of relevant health policies, funding information and public health initiatives
- the collation of a wide range of documents, including academic papers, government reports, books and research reports
- an invitation for public contributions on the NHC website
- meetings with key stakeholders and attendance at relevant conferences, including three Rural Health Symposia and the 2009 Rural General Practice Network.

¹⁸ Health Services Research Centre, Victoria University of Wellington. 2006. *Rural Health: A literature review for the National Health Committee*. Wellington: Victoria University of Wellington.

Rural health workforce issues were not a core focus of the project because the NHC did not wish to duplicate the work of the Health Workforce Advisory Committee and subsequent work by the Ministry of Health, District Health Boards New Zealand, and other agencies. Nevertheless, as part of the NHC's information gathering it recognised that both the recruitment and retention of health professionals in rural New Zealand are ongoing challenges. The project also did not focus on injury prevention.

Definition of 'rural'

The Urban/Rural Profile classification Statistics New Zealand developed has seven categories to describe rural and urban New Zealand.¹⁹ For the purpose of this report, the NHC considers four categories to be rural. The rural categories are:

- Highly Rural/Remote Area
- Rural Area with Low Urban Influence
- Independent Urban Area
- Rural Area with Moderate Urban Influence.
- The three non-rural categories are:
 - Main Urban Area
 - Satellite Urban Area
 - Rural Area with High Urban Influence.

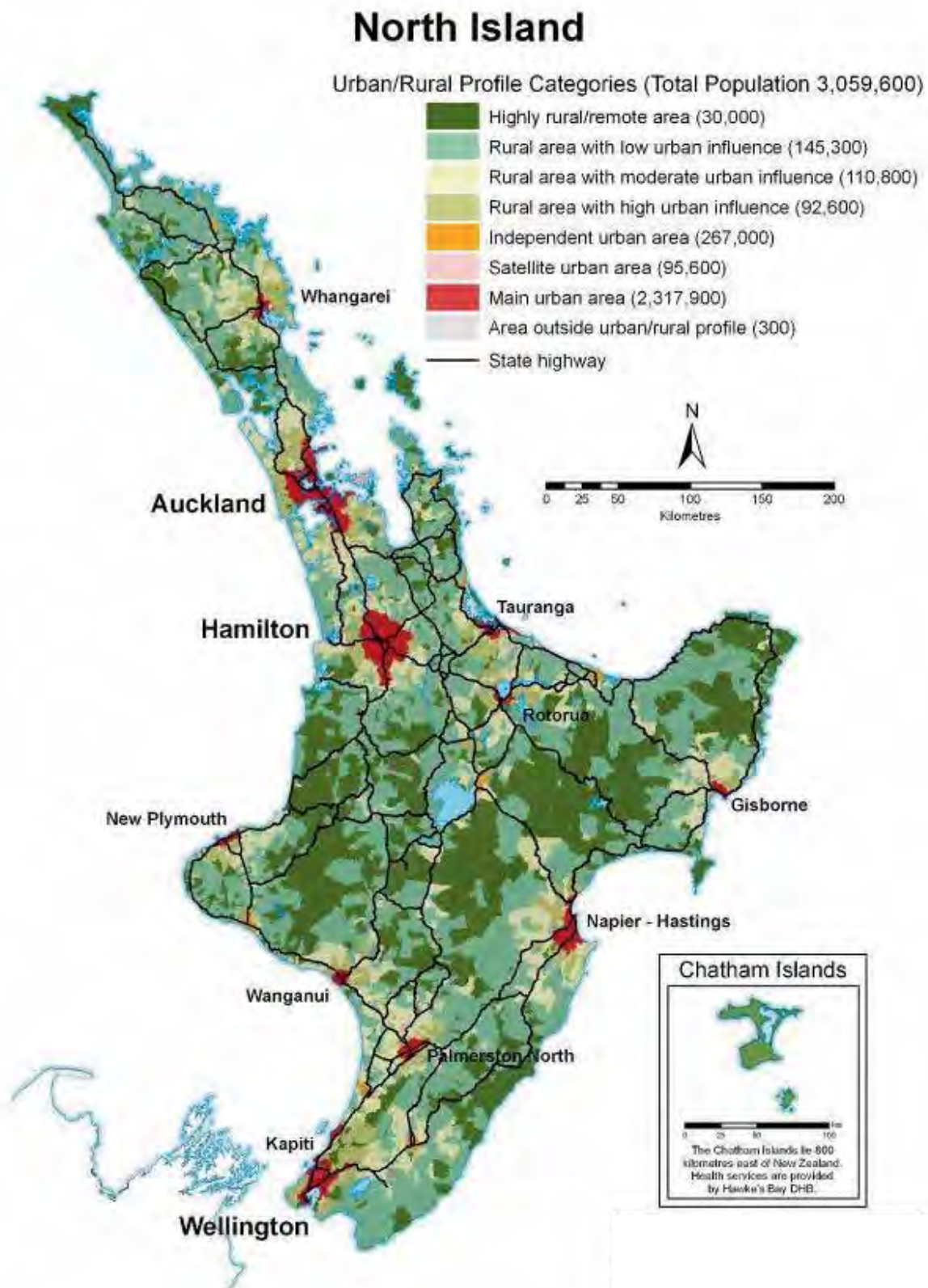
This report focuses on Highly Rural/Remote Areas and Rural Areas with Low Urban Influence because people living in these areas have health needs that are most distinct from those of the urban majority. Independent Urban Areas are also a focus because of their importance to Rural/Remote Areas and Rural Areas with Low Urban Influence. Independent Urban Areas have relatively insignificant connections to Main Urban Areas, are often service centres for surrounding rural areas, and have an interdependent relationship with rural communities. Therefore, Independent Urban Areas are included as 'rural' in this report.

Rural Areas with High Urban Influence are peri-urban or urban fringe areas close to main urban areas. A significant proportion of the resident employed population in those areas work in a main urban area. For this reason they have not been included as 'rural' in this report.

The maps in Figures 1 and 2 illustrate the Urban/Rural Profile classification across New Zealand.

¹⁹ Statistics New Zealand. No date. *Defining Urban and Rural New Zealand*. www.stats.govt.nz/Publications/BusinessPerformanceEnergyAndAgriculture/urban-rural-profile/defining-urban-rural-nz.aspx.

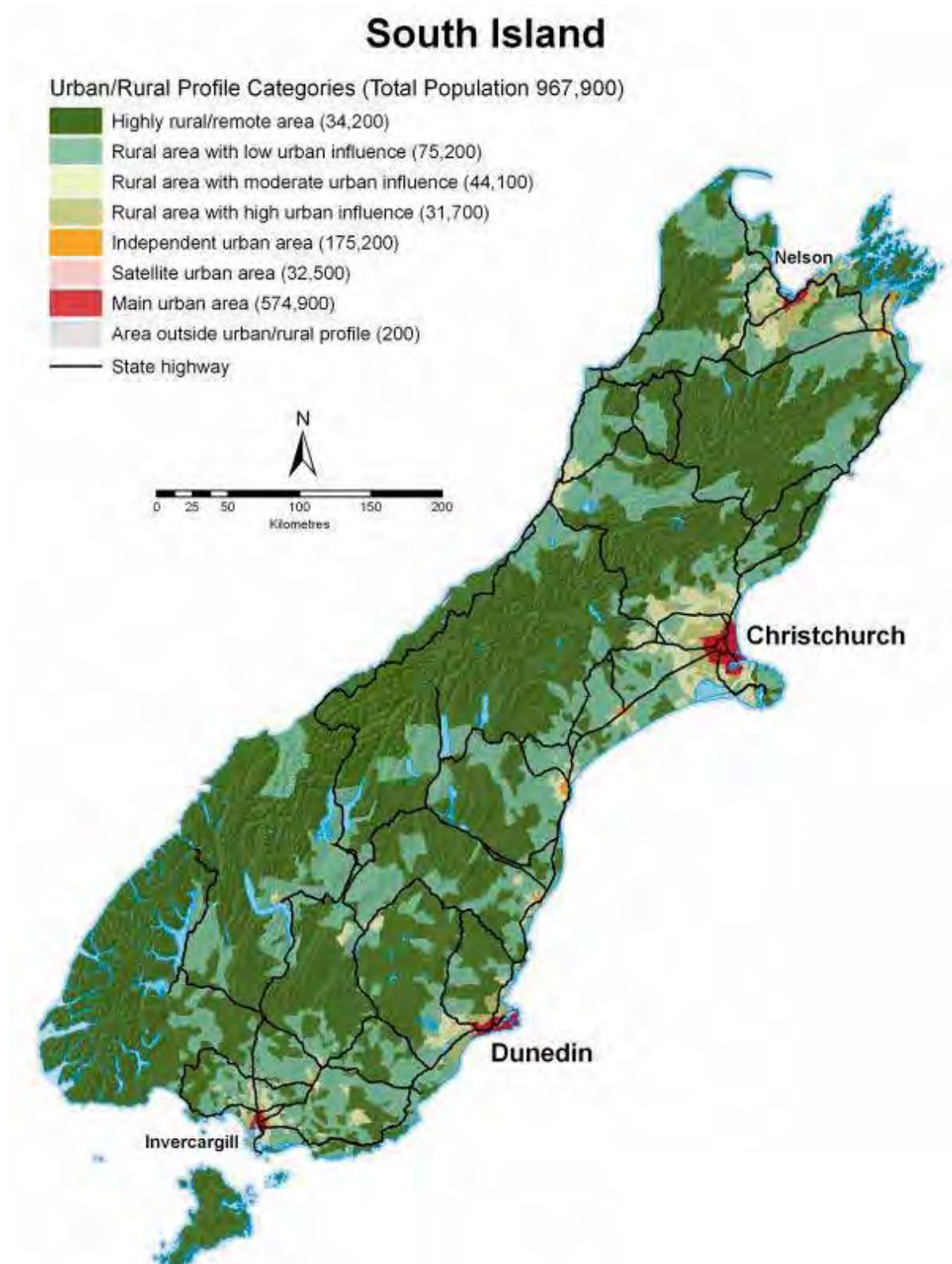
Figure 1: Urban/Rural Profile categories for the North Island, New Zealand, 2006



Note: Population figures have been rounded to the nearest 100.

Source: Statistics New Zealand. 2006. *Urban/Rural Profile: Experimental classification*. Census of Population and Dwellings, 2006. www.stats.govt.nz/urban-rural-profiles.

Figure 2: Urban/Rural Profile categories for the South Island, New Zealand, 2006



Note: Population figures have been rounded to the nearest 100.

Source: Statistics New Zealand. *Urban/Rural Profile: Experimental classification*. Census of Population and Dwellings, 2006. www.stats.govt.nz/urban-rural-profiles.

What the National Health Committee found

This section summarises the challenges for rural health and disability service delivery, identifies government initiatives that have the potential to address some of the challenges, and lists factors the National Health Committee (NHC) considers need to be taken into account when reviewing health service delivery in rural areas.

Challenges for rural health and disability service delivery

The last few decades have seen significant change in rural New Zealand with the restructuring of the primary production sector and the service economy. Changes ranging from farm amalgamation to post office closures have resulted in not only changes to the observable landscape but also in the experience of rural living.²⁰ At the same time, transport links have improved with more sealed roads, and innovations such as broadband and cell phones have improved connectedness between rural communities and urban centres.²¹

Rural communities are diverse with small populations spread over large geographic areas. Addressing the health needs of people living in rural areas is a critical challenge, particularly to meet the needs of people who are older and/or have a disability.²² The NHC believes it is vital that we protect and improve health outcomes for rural New Zealanders.

The NHC gathered information about rural health status and the delivery of rural health and disability services from a variety of sources. These sources included international and New Zealand literature, the Ministry of Health, Statistics New Zealand, visits to District Health Board (DHB) areas and discussions with stakeholders.

Life expectancy and health status

In New Zealand, life expectancy is similar for rural and urban populations overall. The gap between Māori and non-Māori life expectancy is present in both rural and urban areas. Rural Māori have a shorter life expectancy than urban Māori, with 1.2 years difference for women and 1.5 years difference for men.²³

²⁰ Le Heron R, Pawson E (eds). 1996. *Changing Places: New Zealand in the nineties*. Auckland: Longmans.

²¹ Statistics New Zealand. 2006. *New Zealand Urban/Rural Profile*. Wellington: Statistics New Zealand. p 12.

²² Marion D. 2008. The ethics of allocating resources toward rural health and health care. In CM Klugman, PM Dlainis (eds). *Ethical Issues in Rural Health Care*. Baltimore: Johns Hopkins University Press, Chapter 4, p 88.

²³ Source: Abridged life tables, 2005–2007, Statistics New Zealand. Note the rural population includes small towns of less than 10,000 population.

New Zealand research on the health status of rural communities is limited but suggests health status is similar in rural and urban areas. The literature highlights a few areas of concern, including higher unintentional injury rates for rural residents.

In rural areas, a larger proportion of Māori are in NZDep quintile five (high deprivation) areas than are Māori in urban areas. There is a direct correlation between rural areas with high levels of deprivation and the proportion of Māori in the community. Populations matching this description exist in pockets, primarily but not exclusively in the North Island, and are often found in Remote Areas.

Socioeconomic deprivation is strongly linked with poor health outcomes, including mortality, hospitalisations, health risk factors, chronic diseases and many acute conditions.^{24,25} Research has also established the association of increased morbidity and mortality with Māori ethnicity, and that the influences of deprivation and ethnicity on health are independent and distinct.^{26,27} This means we need to be concerned about the potentially compounding effects of deprivation and ethnicity on health, particularly where there are geographic barriers to accessing health services such as long travel distances.

Access to rural health and disability services

Factors that may impede access to health and disability services include socioeconomic deprivation, transport, telecommunications, the cost of accessing services, and service acceptability.

The remoteness of communities or, conversely, the degree to which they are influenced by urban areas has an effect on access to health and disability services. For example, people in remote rural areas are usually at a greater distance from emergency and secondary services, and are less likely to have a landline or cell phone coverage.

The NHC's consultation with rural communities revealed their concern about access to health and disability services. However, there was a willingness to explore new service models to meet local needs. In this way, some rural areas can be seen as leaders in service development in an era of limited resources.

²⁴ White P, Gunston J, Salmond C, et al. 2008. *Atlas of Socioeconomic Deprivation in New Zealand NZDep2006*. Wellington: Ministry of Health.
[www.moh.govt.nz/moh.nsf/pagesmh/8066/\\$File/NZDep2006_text.pdf](http://www.moh.govt.nz/moh.nsf/pagesmh/8066/$File/NZDep2006_text.pdf).

²⁵ Blakely T, Tobias M, Atkinson J, et al. 2007. *Tracking Disparity: Trends in ethnic and socioeconomic inequalities in mortality, 1981–2004*. Wellington: Ministry of Health.

²⁶ Blakely T, Tobias M, Atkinson J, et al. 2007. *Tracking Disparity: Trends in ethnic and socioeconomic inequalities in mortality, 1981–2004*. Wellington: Ministry of Health.

²⁷ Robson B, Harris R (eds). 2007. *Hauora: Māori Standards of Health IV. A study of the years 2000–2005*. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare.

Delivery of rural health and disability services

The NHC believes the health and disability needs of rural communities require specific attention so that each community and each group can access the services they need. The NHC acknowledges that different groups and communities require different levels and types of support in order to live long and healthier lives. The committee also identified the importance of whānau ora approaches for meeting the health and disability needs of rural Māori.

The trend towards specialisation with many services being delivered only from regional centres is a challenge for health and disability service delivery in rural areas. This trend has implications for many of the other challenges that can affect the viability of rural health and disability services. These challenges include workforce recruitment and retention, limited scopes of practice, ongoing training and the workload of health professionals.

The NHC found that to meet the health needs of rural communities more emphasis is needed on comprehensive primary health care, the use of supportive technology (medical and non-medical), and visiting services and transport support. Supportive business models, community governance, broader scopes of practice, and contracts and funding arrangements that are flexible, sustainable and efficient will enable better and more appropriate service delivery.

The NHC acknowledges the initiative, drive and determination of rural communities to find creative solutions to difficult challenges. Local communities have their own resilience and coping strategies that should be considered seriously in planning and policy development.²⁸ Rural partnerships, collaborative approaches and networks highlight how resources can be shared, capacity can be improved, and new models of care can be established to make it easier for rural people to access services.

As some services are devolved from hospitals to primary health care and Integrated Family Health Centres are established, the NHC asks that the Minister of Health ensure a focus on rural communities is maintained to protect and improve rural health outcomes. The paper *Size Matters*²⁹ argues for the development of new, larger, public and private organisations to deliver general practice in England. It also suggests the small private business model still has a place in service delivery. Alternative business models such as community trusts can also play a vital role in the delivery of health services to rural and remote populations.

²⁸ See, for example, Ministry of Civil Defence and Emergency Management. 2009. *Tephra: Community resilience – Research, planning and civil defence emergency management* 22(2009).

²⁹ Corrigan P. 2005. *Size Matters: Making GP services fit for purpose*. Discussion paper. London. New Health Network.

Current work addressing the challenges of rural health and disability service delivery

A variety of new and existing government initiatives has the potential to address the challenges of rural health care delivery.³⁰ The NHC has designed its recommendations and actions to build on these initiatives.

Recently announced initiatives include:

- the devolution of some hospital services to primary health care – \$45.5 million over the next four years, including the creation of Integrated Family Health Centres
- more training for health professionals in rural areas – \$4 million over four years
- \$15.3 million over two years into voluntary bonding for hard-to-staff health professions and locations
- the Rural Medical Immersion Programme – an extra \$5 million over five years as a fund to help rural general practices take on rural immersion students
- the recruitment and retention of rural primary care midwives – \$2 million per year for a Rural Midwifery Recruitment and Retention Service has been contracted in 2009
- improving the quality and supervision in residential aged care facilities and respite care for those being cared for by others at home – \$89.5 million over four years
- the Māori Innovation Fund, which supports innovative ideas and practices, to improve the services offered to Māori and their wider communities and to share exemplar practices and approaches to service design and delivery – \$20 million over four years starting in 2009/10.

Ongoing initiatives addressing rural health challenges include the:

- Rural Innovation Fund, which funds projects to improve rural health service delivery
- Māori Provider Development Scheme building the capacity and capability of 280 kaupapa Māori health providers
- Nurse Practitioner Facilitation programme targeting DHB planners and funders to consider the role of the nurse practitioner in rural settings
- collaboration between MoH and other government departments on initiatives such as the Rural Housing Programme, the Primary Response in Medical Emergencies Scheme, and the Rural Broadband Initiative
- Connected Health initiative, which is aimed at improving the sharing of health information in rural settings and identifying gaps in availability of ultra-fast broadband and related technology for its effective use
- mobile surgical bus, which provides mobile surgical services and professional development for rural health professionals.

³⁰ Information provided by the Ministry of Health.

Factors influencing health and disability service delivery in rural areas

The NHC identified seven factors to assist in reviewing health and disability service delivery in rural areas. These factors are designed to ensure health and disability services reach, and are appropriate for, rural people.

1. **Distance and time:** The distance and time to travel to services and for services to get to communities require consideration for the effective and efficient delivery of services. They are particularly important in emergencies. Some rural communities have developed their own local solutions.
2. **Access:** Access is about people's ability to obtain health care at the right place and the right time regardless of their income, physical location, cultural background, age or sex. Adequate patient transfer and associated systems are essential. Realised access depends on a person's predisposition to seek medical care and the health sector's response in providing services that are affordable, available, accessible, accommodating of the person's needs, and acceptable.³¹
3. **Community development approaches:** The World Health Organization's definition of primary health care includes recognition of the 'full participation' of communities.³² The first key direction of the Primary Health Care Strategy is to work with local communities and enrolled populations.³³ Engaging local rural communities in their own health and disability services improves health outcomes and local service viability as well as reducing costs.
4. **Māori ways of working:** Whānau ora recognises the interconnectedness of health, education, housing, justice, welfare, employment and lifestyle elements of whānau wellbeing. Delivering appropriate health and disability services requires consideration of cultural factors. Providers should be supported to deliver services that enhance whānau ora and work in culturally appropriate ways.
5. **Partnership and collaboration:** Rural partnerships, collaborative approaches and networks highlight how resources can be shared, capacity can be improved, and new models of care can be established to make it easier for rural people to access services.
6. **Sustainability of services:** Factors that ensure the sustainable delivery of services include a locally available workforce, the certainty of ongoing funding, and physical and financial resources.

³¹ Penchansky and Thomas, 1981, cited in Laiw S, Kilpatrick S (eds). 2008. *A Textbook of Australian Rural Health*, Canberra: Australian Rural Health Education Network; Raymont A. 2008. *Improving Access to Health Services for Vulnerable Populations: A review of the literature*. Wellington: District Health Boards New Zealand.

³² International Conference on Primary Health Care. 1978. *Primary Health Care: Report of the International Conference on Primary Health Care, Alma Ata, USSR*. Geneva: World Health Organization.

³³ Minister of Health. 2001. *The Primary Health Care Strategy*. Wellington: Ministry of Health.

7. **Changing environment:** Just as the natural landscape changes over time so do rural communities. Catalysts for change include changes in rural industry, demographics, lifestyles, climate change and natural disasters, and economic, political and social changes. These present both challenges and opportunities for improving the health of rural communities. The health system needs to take these changes into account in its planning and service design.

Implementing the National Health Committee's recommendations

In this section, each of the National Health Committee's (NHC's) 10 recommendations is discussed and supported with suggestions for translating the recommendations into action. Where relevant, the NHC provides examples of existing local initiatives.

Improve service delivery

Recommendation 1

Improve the delivery of comprehensive primary health care to rural New Zealanders.

Recommendation 1.1

Ensuring future developments in primary health care give specific consideration to rural populations especially those who face the greatest barriers in accessing health services.

Access to quality, timely and appropriate comprehensive primary health care will enable rural New Zealanders to live longer, healthier and more independent lives.³⁴

Primary health care is usually the first and most extensive level of contact people have with the health system. Comprehensive primary health care involves providing a range of co-ordinated services such as prevention and screening, general practice, pharmacy, allied health, and social support services close to where people live and work. This enables better prevention, early detection and effective intervention. Members of the community should also be involved in the planning and delivery of services to best meet their needs.^{35,36} Likewise, to develop effective services it is important to involve primary health staff when designing or changing services.

³⁴ National Health Committee. 2000. *Improving Health for New Zealanders by Investing in Primary Health Care* 2000. Wellington: Ministry of Health; Minister of Health. 2001. *The Primary Health Care Strategy*. Wellington: Ministry of Health; Ministry of Health. 2009. *Statement of Intent 2009–2012*. Wellington: Ministry of Health. p 9.

³⁵ International Conference on Primary Health Care. 1978. *Primary Health Care: Report of the International Conference on Primary Health Care, Alma Ata, USSR*. Geneva: World Health Organization.

³⁶ Rural Expert Advisory Group. 2002. *Implementing the Primary Health Care Strategy in Rural New Zealand: A report from the Rural Expert Advisory Group to the Ministry of Health*. Wellington: Ministry of Health. [www.moh.govt.nz/moh.nsf/0/E371A046A4A44994CC256C0D0017DE98/\\$File/RuralPrimaryHealthStrategyImplementation.pdf](http://www.moh.govt.nz/moh.nsf/0/E371A046A4A44994CC256C0D0017DE98/$File/RuralPrimaryHealthStrategyImplementation.pdf).

The NHC is encouraged by the Government's commitment to improving access to health care by shifting some services located in hospitals into community settings. It is expected that these could include some minor surgical procedures, diagnostic testing, and specialist outpatient services. Models of delivery could include health providers travelling to rural communities (for example, mobile surgical services), health services provided on marae, nurses delivering after-hours services with support from general practitioners, and the employment of kaiawhina and health assistants based in local communities.

Rural communities provide good locations for piloting new initiatives. Findings from such pilots can help to inform further policy development and improvement of services to best meet local needs.

The NHC observed many examples of rural communities developing new models of primary health care. Many communities now have nurse-led clinics, nursing outreach teams, or other ways of intensively using the skills of nurses.³⁷ Increasing the involvement of nurses in primary health care can improve the health of the population in a cost-effective way.

The NHC hopes that drawing attention to existing initiatives might offer ideas for other rural areas and the District Health Boards (DHBs) and Primary Health Organisations (PHOs) that service them. Some initiatives may also be applied successfully in urban areas. Sometimes small, cohesive communities can achieve things faster and more effectively than their larger counterparts.

³⁷ Primary Health Care Nurse Innovation Evaluation Team. 2007. *The Evaluation of the Eleven Primary Health Care Nursing Innovation Projects*. Wellington: Ministry of Health.

Actions to assist in implementing the recommendations

Recommendation 1.1: Ensuring future developments in primary health care give specific consideration to rural populations especially those who face the greatest barriers to accessing health services.		
Challenge	Suggested action	Who
<p>Improve primary health care</p> <p>Remoteness, diversity and sparse populations make it easy to overlook the specific health care requirements of rural communities.</p>	<p>Explicitly include rural communities when further implementing the Primary Health Care Strategy, including ensuring policies and initiatives include rural communities by applying the:</p> <ul style="list-style-type: none"> principles underpinning the Primary Health Care Strategy Ministry of Agriculture and Forestry's Rural Proofing Tool.³⁸ <p>To inform future policy development:</p> <ul style="list-style-type: none"> consult key stakeholders in rural areas on actions necessary to safeguard the most crucial aspects of local primary health care ensure criteria being developed for Integrated Family Health Centres enables and encourages their establishment in Independent Urban Areas establish as soon as possible at least one Integrated Family Health Centre in an Independent Urban Area. <p>Develop other models for primary health care delivery that meet remote rural areas' needs.</p>	Ministry of Health
<p>Service design does not always recognise the realities for rural people accessing services.</p> <p>Rural practice requires broader scopes of practice, while responsibilities are spread among fewer health workers.</p>	<p>Agree on service standards for DHBs. For example, ensure primary medical services and/or nursing services with medical back-up for 95 percent of their population within each rural profile within:</p> <ul style="list-style-type: none"> 30 minutes travel time as part of a normal business day 60 minutes travel time for after-hours services.³⁹ <p>Encourage the development of nurse-led clinics, particularly for the management of chronic conditions and post-operative follow up.</p> <p>Develop models of care pragmatically, using the workforce available locally, for example by:</p> <ul style="list-style-type: none"> enabling flexible use of workforce and volunteers, including community first responders supporting the roles of nurse practitioner and rural nurse specialists, including: <ul style="list-style-type: none"> additional support for training and postgraduate education support for nurse leadership and nurse participation in primary health care governance providing funding to employ kaiawhina supporting extended scopes of practice for paramedics, so rural paramedics can participate in delivering primary health care. 	Ministry of Health DHBs

³⁸ Ministry of Agriculture and Forestry. 2008. *Rural Proof Your Policy: A guide for government policy advisers*. Wellington: Ministry of Agriculture and Forestry.

³⁹ Rural Expert Advisory Group. 2002. *Implementing the Primary Health Care Strategy in Rural New Zealand: A report from the Rural Expert Advisory Group to the Ministry of Health*. Wellington: Ministry of Health. [www.moh.govt.nz/moh.nsf/0/E371A046A4A44994CC256C0D0017DE98/\\$File/RuralPrimaryHealthStrategyImplementation.pdf](http://www.moh.govt.nz/moh.nsf/0/E371A046A4A44994CC256C0D0017DE98/$File/RuralPrimaryHealthStrategyImplementation.pdf).

Examples of local initiatives

Kaiawhina

Kaiawhina are increasingly common in primary health settings throughout the country. Kaiawhina are also known as community health workers or Māori health or support workers. They have emerged in the context of a maturing health system, which recognises that different communities require different methods of communication and service delivery. By incorporating the concepts of tautoko (support), manaaki tangata (hospitality), karakia (spiritual guidance) and other Māori cultural imperatives, kaiawhina help to bridge the gap that often exists between professional health workers and Māori patients and their whānau.

Kaiawhina have many roles, including supporter, navigator, information broker, locator, educator, interpreter, coach/mentor, facilitator, co-ordinator, friend, spiritual provider/ intervener, and pastoral carer.

The NHC heard that kaiawhina:

- increase access to primary health care services for the people hardest to reach, particularly in rural areas
- promote whānau ora by discussing health-related issues within the home, with multiple members of the family, and within the context of the kaiawhina's local knowledge
- assist in identifying those most at risk of developing a chronic disease by meeting the person's whole whānau and intervening when the disease is still preventable or reversible.

In the course of their work, kaiawhina get to know individuals and their families and identify many of their primary health care needs. For example, Te Korowai Hauora o Hauraki kaiawhina work alongside registered nurses to:

- perform Well Child checks (and some are trained in immunisation and child protection awareness)
- transport clients to medical appointments
- perform needs assessments for disability support services
- promote physical activity and nutrition.

On the West Coast, the PHO identified Māori who were not enrolled with the PHO, so had reduced access to services. The PHO worked with the local iwi to employ a kaiawhina to find those individuals and encourage them to enrol. The process helped the PHO to identify barriers to local people accessing services.

Point-of-care testing – Rawene Hospital, Hokianga Health Enterprise Trust, Northland

Point-of-care testing is used in several New Zealand rural hospitals. In 2008, the Hokianga Health Enterprise Trust received funding through the Rural Innovation Fund for a pilot study of point-of-care testing in Rawene Hospital. This small, rural, Northland hospital serves a population that is approximately 70 percent Māori and has no onsite laboratory.

Before the pilot study, the hospital sent laboratory tests to Whangarei Hospital, which involved an 8 to 72 hour turn around time between Monday and Friday. On weekends laboratory testing was not available. The situation was not ideal, especially for acute patients. Over six months, point-of-care testing was undertaken on 170 patients and used for about 70 percent of admissions. Point-of-care testing substantially changed treatment for 75 percent of cases, had some change in 22 percent of cases, and no change in 3 percent of cases.

Doctors involved in the pilot study reported positive results. Some of these results were that the point-of-care testing helped to:

- avoid unnecessary hospital transfers
- enable transfer decisions to be made earlier
- increase diagnostic certainty (point-of-care testing narrowed the differential diagnosis for 94 percent of patients)
- improve the clinicians' abilities to diagnose challenging cases.

Improve travel assistance

Recommendation 1.2

Improving travel assistance by:

- reviewing the National Travel Assistance Policy so rural people can claim travel expenses to attend any health service appointment which is beyond the agreed threshold distance from their home
- making it easier for people to travel to services, with a particularly emphasis on people with disabilities and older people
- making it easier for services (including first response services) to get to people, especially people with disabilities and older people.

Health services are becoming increasingly specialised, relying on high-cost equipment and a limited pool of expert health professionals. Some equipment and professionals are not mobile. It must be recognised that increasing specialisation in central locations carries with it a responsibility to ensure access for rural communities.

The NHC found that people with disabilities and older people in rural communities face additional challenges in accessing health services. Fewer disability and aged care support services tend to be available in rural locations than in urban areas. Challenges for provision include finding appropriate support staff, the cost of delivering services across long distances, and the lack of economies of scale.

The NHC welcomes the increase to the amount people can claim under the National Travel Assistance Scheme from 20 cents per kilometre to 28 cents per kilometre. However, more can be done to improve rural people's access to services. The NHC heard numerous stories about people finding the process of claiming travel subsidies onerous because of the restrictive way in which DHBs interpret the National Travel Assistance Policy. The NHC suggests that transport subsidies be available for any referral to a secondary care service, for example, when a primary health care provider refers a patient to a first assessment.

To improve the health and wellbeing of rural New Zealanders, the NHC is of the view that the Minister of Health, the Ministry of Health, DHBs, PHOs and emergency services need to work together to address transport issues. For example, how the National Travel Assistance Policy is being interpreted and implemented needs to be reviewed to ensure consistency.

The New Zealand Disability Strategy and New Zealand Positive Ageing Strategy should continue to be implemented. This should include reviewing and improving the quality of aged and disability service provision, including hospitals' discharge plans and policies.

Support for the continued implementation of the New Zealand Ambulance Service Strategy is also needed so that retrieval times are shorter and survival rates higher.⁴⁰ It is hoped that the Government's recent increase of \$47 million over five years will support this.

⁴⁰ Ministry of Health, Accident Compensation Corporation. 2009. *New Zealand Ambulance Service Strategy*. Wellington: Ministry of Health and Accident Compensation Corporation.

Actions to assist in implementing the recommendations

Recommendation 1.2.1: Improve travel assistance by reviewing the National Travel Assistance Policy so rural people can claim travel expenses to attend any health service appointment which is beyond the agreed threshold distance from their home.		
Challenge	Suggested action	Who
<p>Improve travel assistance</p> <p>Claiming travel subsidies is:</p> <ul style="list-style-type: none"> retrospective, making it difficult for people on low incomes to find the means to cover the initial cost lengthy, taking a minimum of four weeks to claim and receive reimbursement. <p>The subsidy level does not meet the true cost of travel.</p>	<p>Review the National Travel Assistance Policy to:</p> <ul style="list-style-type: none"> allow transport subsidies to be claimed for the first visit to a specialist (for example, when a primary health care provider refers a patient for assessment) with the patient's authorisation, allow transport subsidies to be claimed by provider organisations who transport patients to services (for example, Primary Health Organisations, voluntary organisations and Māori providers) allow primary health care and other providers to provide subsidies for Community Service Card holders in advance of travel to appointments. <p>Establish a review process to ensure the level of subsidy maintains a realistic relationship to the actual cost of transport.</p>	Ministry of Health

Recommendation 1.2.2: Improve travel assistance by making it easier for people to travel to services, with a particularly focus on people with disabilities and older people.		
Challenge	Suggested action	Who
<p>Ensure people can travel to services</p> <p>People with disabilities and older people living in rural communities have limited access to appropriate transport services, making it difficult for them to get to health and disability services.</p>	<p>As per the New Zealand Disability Strategy: ensure people with disabilities people can access appropriate health services within their community.</p> <p>Support and encourage creative, locally appropriate transport options for health and disability services by:</p> <ul style="list-style-type: none"> supporting the purchase of community-owned and -operated service vans to collect clients and take them to appointments encouraging partnering with local transport operators and service agencies in rural areas supporting and strengthening local volunteerism, including home visiting, by reimbursing volunteer drivers' petrol costs. <p>Provide services locally by:</p> <ul style="list-style-type: none"> using outreach clinics and technology to enable general practitioners to undertake outpatient services and screening reviewing scopes of practice (for example, to enable more nurses and ambulance staff to act in a wider range of situations). 	<p>Ministry of Health</p> <p>DHBs</p> <p>Accident Compensation Corporation</p>

Recommendation 1.2.3: Improve travel assistance by making it easier for services (including first response services) to get to people, especially people with disabilities and older people.		
Challenge	Suggested action	Who
Ensure health and disability services can travel to people	Integrate the provision of disability, aged care and health support services or co-locate them with social services on marae or in Independent Urban Areas.	Ministry of Health
Agencies cannot always provide home-based services in rural areas because of the distances required to travel between clients.	Improve the availability of health and community support services for older people and people with disabilities in rural areas.	DHBs Primary health organisations
Services for people with disabilities living in rural locations are poorly co-ordinated.	Encourage the development of aged care residential services in Independent Urban Areas so rural people who cannot live independently can remain close to their communities. These services could be established in conjunction with other social services or be located on marae.	Ministry of Health Ministry of Social Development
	Ensure primary health organisations take the lead role in co-ordinating services for rural people with disabilities.	Primary health organisations

Examples of local initiatives

Mobile surgical bus

The Mobile Surgical Services programme was launched in October 2002 with funding from the Ministry of Health. A specially equipped mobile operating theatre in a truck (the mobile surgical bus) brings day surgery facilities to small rural hospitals, and a national and international exchange of expertise to larger hospitals. The mobile surgical bus is fitted with digital interactive video equipment, providing local surgical teams with direct communication during surgery with expert colleagues offsite. This is useful in cases that are difficult or unusual or where a new idea has been developed, and gives patients safe access to the latest surgical advances.

Order of St John Community First Responder Initiative

The Community First Responder Initiative grew out of a 2005 collaboration among Waikato DHB, the Order of St John and committed local people in the Waikato communities of Aria and Kaitieke. The purpose of the project is to support ambulance crews where the response time would be longer than 20 minutes, with appropriately trained and resourced people who can arrive at the scene of an emergency sooner. There are now nine active sites in the district. St John supplies first aid backpacks and provides a two-day workplace first aid certification training course for volunteers living locally. All responders are also trained to use, and have access to, automated external defibrillators. St John offers six-monthly refresher training. Dozens of accident scenes have been attended by community first responders.

The NHC was told that once the initiative is under way, the volunteer first responder receives calls before the ambulance, because the volunteer is locally known and can be on the scene before the ambulance. The first responder sometimes finds they can provide everything the situation demands, and the ambulance is not required. DHB representatives see the initiative as a way to support the communities 'resilience and self-sufficiency'⁴¹ and St John calls it a 'great success story for the rural communities'.

Their enthusiasm and dedication to helping others residing or passing through their community ensures that this group of patients receive a timely response in their time of need.⁴²

Primary Response in Medical Emergencies

Primary Response in Medical Emergencies (PRIME) is a jointly commissioned project funded by the Ministry of Health and Accident Compensation Corporation and administered by the Order of St John. It has been developed to provide both a co-ordinated response and appropriate management of emergencies in rural locations. PRIME uses the skills of specially trained rural general practitioners (GPs) and/or rural nurses to support the ambulance service in remote areas.

A PRIME practitioner carries a pager, and is mobilised by the regional ambulance communications centre following an emergency call. PRIME activates the practitioner on a local roster system that provides a response capability 24 hours a day, seven days a week.

The objectives of PRIME are to support the ambulance service with a rapid response to seriously ill or injured people and to provide a higher level of medical skill in remote emergency situations.

PRIME practitioners must undertake a PRIME training course followed by a refresher training course for trauma and medical emergencies at least once every two years. A PRIME practitioner is supplied with a tailored medical kit to cater for a variety of emergency situations.

Improve system performance

Improve local rural capacity

Recommendation 2

Improve local rural capacity by encouraging the use of alternative business models, fostering partnerships and supporting training in health service governance.

⁴¹ Grant O'Brien, Waikato DHB, communication with the NHC, 2007.

⁴² Order of St John. 2009. *Ministry of Health Performance Monitoring Return: Rural community first response 30 June 2008–30 June 2009*.

Primary health care services traditionally adopted an owner–operator small business model. Some rural communities have struggled to sustain primary health care services using this approach.

Special Medical Areas were designed to provide a safety net to protect rural communities against failure of the owner–operator model (see Appendix 1). In recent years, some rural communities have led the way by introducing alternative business models to provide sustainable and accessible services. These models include DHB-owned services, community trusts and Māori providers. Training in governance, management and performance monitoring is required to ensure services are of a high quality.

Actions to assist in implementing the recommendations

Recommendation 2: Improve local rural capacity by encouraging the use of alternative business models, fostering partnerships and supporting training in health service governance.		
Challenge	Suggested action	Who
Improve capacity Some rural communities have struggled to retain their primary health care services and workforce using the owner–operator small-business model.	Encourage the use of alternative ownership models such as trusts or combining resources between a DHB and primary health organisation to provide sustainable primary health care in rural areas. Support innovative capital arrangements for rural communities to build or retrofit facilities appropriate to their local purpose. Disseminate information about how rural health trusts have been working in rural New Zealand. Foster and encourage local community involvement in the governance and service development of comprehensive primary health care. This might include: <ul style="list-style-type: none"> • trust ownership of infrastructure • flexible funding arrangements • financial support for clinical training and development • partnering with local agencies such as social services. Provide school and marae-based services, outreach clinics, and mobile services. Recognise the human service synergies involved in providing health care (for example, viability of rural schools), and provide comprehensive family-oriented support for rural health practitioners to settle and stay in local communities. Promote, support and encourage the Rural Medical Immersion Programme through the Universities of Otago and Auckland.	Ministry of Health DHBs Primary health organisations Universities

Recommendation 2: Improve local rural capacity by encouraging the use of alternative business models, fostering partnerships and supporting training in health service governance.		
Challenge	Suggested action	Who
Knowledge and skills for good governance, management and evaluation is lacking.	<p>Provide funding to enable local capacity building, including training in governance, management and evaluation skills.</p> <p>Share best practice information about the delivery of health services to rural communities through rural centres of excellence, existing networks and information channels.</p>	<p>Ministry of Health DHBs Universities</p>

Examples of local initiatives

Hokianga Health Enterprise Trust

The Hokianga Health Enterprise Trust grew out of a Special Medical Area (see Appendix 1). The trust is a not-for-profit health service that was developed in response to low-income remote communities being unable to access primary health care due to cost and other barriers.⁴³ When the Government announced the removal of Special Medical Areas' exemption from prescription charges in 1991, the community in Hokianga established the trust and gained a pharmaceuticals budget-holding contract, which allowed it to continue to offer free prescriptions.⁴⁴ Importantly, a move was made to full budget-holding, which allowed continued free universal health care not only for residents, but also for visitors. This allowed the trust to maintain the ethic of manaakitanga, which is highly valued locally.⁴⁵

Colville Community Health Trust

The Colville Community Health Centre administered by the Colville Community Health Trust was established in 2003. The trust serves a local population of 600 enrolled patients and each summer the community's numbers increase to 5,000–10,000. Establishing the trust was initially difficult, as funding for new initiatives was not available outside the model of capitation for enrolled patients.

⁴³ Kearns R, Neuwelt P. 2009. Within and beyond clinics: Primary health care and community participation. In G Andrews, V Crooks (eds). *Primary Health Care: People, practice, place*. Aldershot: Ashgate Press. pp 203–220.

⁴⁴ Health Services Research Centre, Victoria University of Wellington. 2006. *Rural Health: A literature review for the National Health Committee*. Wellington: Victoria University of Wellington. p 26.

⁴⁵ Kearns R, Gesler W. 1998. Going it alone: Community resistance to health reforms in Hokianga, New Zealand. In *Putting Health into Place: Landscape, identity and well-being*. Syracuse, NY: Syracuse University Press. pp 226–247.

Local people worked for the centre on a voluntary basis for six months to initiate a viable local general practice and fundraise for infrastructure costs. It took another 12 months to develop the Colville Community Health Trust (with doctor, nurse, St John, local council and elected community representatives). The trust's role is to prioritise, fund, purchase and manage required infrastructure (including vehicles and medical equipment). A separate arm of the trust was formed to access funding for the building, a multi-purpose community centre.

The doctor associated with the Colville Community Health Trust explains:

It used to be 'bring it with you and fund it yourself'. Now it's 'we have this wonderful facility, come and practise'.⁴⁶

The community owns the infrastructure. This arrangement works well for GPs who want to practise medicine rather than run businesses.

The Colville Community Health Centre is open five days a week: three days as a GP clinic with practice nurse support and two days as a nurse-led clinic. The doctor and two nurses (working part time by choice) provide GP after-hours care. PRIME services have developed a St John first response team with willing community members, for which there is now a locally based ambulance with extra emergency equipment. A weekly clinic is held at Port Charles. The Colville Community Health Trust relieves pressure on Coromandel town services by providing comprehensive primary health care to those furthest from Coromandel town. Pressure is also relieved on Thames and Waikato hospitals by the provision of minor surgical and diagnostic procedures, individualised rehabilitation and palliative care.

Multidisciplinary practice is possible in rural areas. It is true that there is a disproportionately large cost in rural health, but if you don't put that money in, it is going to cost even more. The health administrators can't see it because they can't audit the funds due to the many different contracts and funding streams.⁴⁷

In addition Colville Rural Nursing Ltd (CRNL) was established in 2007 to meet needs of families living rurally who had been identified by Colville Community Health Trust staff. With nursing staff originally employed by the trust, CRNL incorporates district and public health nursing and is entirely nurse-led. The PHO contracts CRNL to provide district and public health nursing, travel and most ongoing education, plus 16 hours a week of nurse-led clinic. The income generated from CRNL goes to the trust.

Each of the nurses has specialist qualifications, such as midwifery and acupuncture, and one has a clinical masters degree in nursing with prescribing and is a nurse practitioner candidate. Ongoing education and professional development are fundamental to their practice. This model has increased the capacity of the local workforce to provide comprehensive primary health care services.

⁴⁶ Dr Kate Armstrong.

⁴⁷ Dr Kate Armstrong.

The scope of rural practice is so wide and the demands are so varied that there is an increased need for ongoing training and Continuing Medical Education. The Colville Community Health Trust has addressed this issue by encouraging the nurses' postgraduate and Continuing Medical Education courses, and by acquiring network video-conferencing equipment in Colville. This has not yet achieved its full potential, as some providers of Continuing Medical Education have not begun implementing the technology.

The Colville Community Health Trust has a focus on community ownership and involvement. Because local people invest their skills and effort in the upkeep and fundraising, they have complete trust in the system.

The service is known to be a wonderful resource, and community embedded. Knowing the people well ensures trust and strengthens the patient-health provider relationship. Consumers lacking trust in the health system is one of the biggest problems in modern health care because they don't have faith in the person giving them advice, so they don't follow it. Along with community ownership comes commitment from the community, which could involve voluntary working bees. If they see you digging a hole and hammering nails they will see your commitment goes beyond your job.⁴⁸

Community governance ensures the organisation's health services are responsive to the community's needs, and the high level of trust and engagement improves patient compliance and outcomes, changing the nature of local health services delivery for the better.⁴⁹

Improve the administration of funding

Recommendation 3

Improve funding arrangements and reduce contract transaction costs by having fewer funding streams and encouraging greater use of integrated contracts.

Rural health service providers tend to provide a wide range of services. In some small communities there is only one health care provider, so the provider is responsible for the total primary health care needs of the local population. The demand to offer a wide range of services means rural providers often contend with multiple funders and multiple funding streams. This in turn means service providers have to manage many different contracts each with its own reporting and auditing requirements.

The transaction costs associated with this level of complexity divert resources from frontline services and place an extra burden on rural providers that, due to their size, have few back office staff. Reducing the number of separate contracts by using an integrated contracting approach, placing a greater focus on outcomes, and streamlining reporting requirements will assist providers to deliver services more efficiently.

⁴⁸ Dr Kate Armstrong.

⁴⁹ WHO. 2008. *Primary Health Care: Now more than ever*. Geneva: World Health Organization; Flinders Medical Centre. 1995. *A Guide to Doing Needs Assessment in Rural Communities*. Bedford Park, SA: Flinders Press; Neuwalt P. 2007. *Community Participation Toolkit: A resource for Primary Health Organisations*. Wellington: Steele Roberts.

Different formulae are used (including the rural funding adjuster, see Appendix 3) to take account of the additional costs associated with delivering health services to rural communities. The NHC proposes that there be just one 'rural adjuster' and that it be built into the population-based funding formula. The NHC has not devised the detail of such a rural adjuster, but the adjuster must take account of the various factors that influence the final cost of delivering health services to rural communities, including such things as additional costs associated with:

- staff recruitment and retention
- locums
- continuing professional development
- staff (whether they be employed by primary care or DHBs) having to travel significant distances to deliver services in sparsely populated areas
- the National Travel Assistance Policy
- the relative lack of economies of scale inherent with small organisations
- access to diagnostics
- access to ambulatory care services that are often provided from hospital sites.

Actions to assist in implementing the recommendations

Recommendation 3: Improve funding arrangements and reduce contract transaction costs by having fewer funding streams and encouraging greater use of integrated contracts.		
Challenge	Suggested action	Who
<p>Improve the administration of funding</p> <p>There are too many contracts and too much time and resources spent on reporting and compliance costs.</p> <p>There are several rural funding adjusters, resulting in unnecessary complexity.</p>	<p>Integrate health funding streams to ensure more efficient administration of funding with fewer overall contracts.</p> <p>Work with the Integrated Contracting Team within the Ministry of Social Development to develop integrated contracts across health, disability and social services.</p> <p>Streamline systems to enable local providers to update their integrated contracting arrangements with funders as their range of services changes.</p> <p>Develop one rural funding adjuster that takes into account all the factors that influence the cost of health service delivery to rural communities. This adjuster would then be applied to the population-based funding formula, so have a direct effect on the money available to each DHB to purchase services for its rural populations.</p>	<p>Ministry of Health</p> <p>DHBs</p>

Examples of local initiatives

Te Rūnanga o Te Rarawa: Integrated contract⁵⁰

The initial ground-breaking work for this initiative was started by the Funding for Outcomes project team within the Ministry of Social Development in 2003 with Te Rūnanga o Te Rarawa and the funders (listed below). Before the integrated contract was developed, the provider had 36 individual contracts. Some contracts required reports every month, and others every three or six months. Reporting and payment dates varied across the month. Some payments were made in advance, while others were made retrospectively.

The funders were the Ministry of Health; Northland DHB; Housing New Zealand Corporation; Family and Community Services; Child, Youth and Family; Work and Income; the Ministry of Education; and the Māori Purchasing Organisation. The original integrated contract was 105 pages long, because funders wanted their service specifications attached. A variation was completed in 2008 omitting 23 pages. A new contract is being developed, and it is hoped that this will be more integrated, more aligned and shorter.

The integrated contract's advantages included:

- one contract instead of 36 contracts
- fewer monitoring reports required, thereby reducing compliance costs
- most payments in advance
- funders receive the integrated monitoring report and have a better understanding of the entire service provision rather than just their programme
- at biannual review meetings the funders can work collaboratively
- instead of at least one funder spending a day with the provider most months, funders who wish to monitor or verify information about clients agree on two consecutive days every six months to complete these tasks
- a new results-based accountability reporting template is being developed because funders and the provider agree the current reports do not reflect actual service provision or capture the information or results the funders need.⁵¹

Promote whānau ora and Māori models of practice

Recommendation 4

Support primary health care providers to deliver services that enhance whānau ora and ensure all providers are accessible to Māori and work in culturally appropriate ways.

⁵⁰ Source: Ministry of Social Development, Family and Community Services, Integrated Contract Team.

⁵¹ Friedman M. 2005. *Trying Hard Is Not Good Enough. How to produce measurable improvements for customers and communities.* Canada: Trafford Publishing.

Many rural Māori have high levels of deprivation and poor health. Considerable attention needs to be given to this group, which in turn will help to reduce inequalities in health in New Zealand.

Whānau ora is one of priorities listed in the Ministry of Health's *Statement of Intent 2009–2012*. Whānau ora is an approach Māori providers and PHOs use to support Māori families to achieve maximum health and wellbeing.⁵² The Māori Innovation Fund, which is aimed at promoting whānau ora, is well placed to support rural Māori initiatives. The fund provides a catalyst to stimulate innovative ideas and practices to improve the services offered to Māori and their wider communities, and to share these ideas and practices.

The Māori Provider Development Scheme was established in 1997 and aims to build the capacity and capability of Māori health providers of which 32 percent are rural. A recent evaluation of the scheme found that it had resulted in improvements across several areas, especially information technology and workforce.

⁵² Public Health Advisory Committee. 2006. *Health is Everyone's Business: Working together for health and wellbeing – A report to the Minister of Health on the implications of a changing context for public health in New Zealand*. Wellington: Public Health Advisory Committee (a subcommittee of the National Health Committee).

Actions to assist in implementing the recommendations

Recommendation 4: Support primary health care providers to deliver services that enhance whānau ora and ensure all providers are accessible to Māori and work in culturally appropriate ways.		
Challenge	Suggested action	Who
<p>Learn from Māori ways of working</p> <p>Rural Māori may have high levels of deprivation and/or poor health.</p> <p>Doctors report lower levels of rapport with Māori patients.⁵³</p> <p>Provision of services is culturally inappropriate, and a focus on the individual patient rather than the whānau discourages access to services.</p>	<p>Ensure the Māori Innovation Fund provides funding for initiatives targeting rural Māori.</p> <p>Weight the criteria for assessing applications to the Māori Innovation Fund in favour of those applications seeking to implement whānau ora in rural communities.</p> <p>Continue to support the Māori Provider Development Scheme and rural Māori health providers.</p> <p>Require general providers to be accessible to Māori by delivering primary health care services in a culturally appropriate way, promoting whānau ora and providing a range of treatment options where appropriate. Establish and monitor performance requirements associated with this.</p> <p>Encourage rural health services staff serving Māori populations to attend training in tikanga and te reo and to access clinical best practice information.</p> <p>Support Māori providers to disseminate information about whānau ora best practice and offer advice to general providers.</p>	<p>DHBs</p> <p>Ministry of Health</p>
<p>Māori providers report they have too many reporting requirements and are too frequently audited.</p>	<p>Ensure reporting and auditing requirements are not more onerous for Māori providers than for other providers.</p>	<p>Ministry of Health</p> <p>DHBs</p>

Examples of local initiatives

Te Tai Tokerau Māori Health Strategic Alliance

Te Tai Tokerau Māori Strategic Alliance is an alliance of five iwi-based Māori provider organisations: Whakawhiti Ora Pai, Te Hauora o Te Hiku o Te Ika, Te Rūnanga o Te Rarawa, Ngāti Hine Health Trust, and Ki a Ora Ngati Wai. The purpose of the alliance is to contribute to the wellbeing of Te Tai Tokerau whānau, hapū and iwi by contributing to the elimination of disparities in health status. The alliance works to provide Māori health sector leadership and strategic collaboration to improve the health status of Māori.⁵⁴

⁵³ Crengle S. 2007. Primary care and Māori: Findings from the National Primary Medical Care Survey. In Robson B, Harris R (eds). *Hauora: Māori Standards of Health IV. A study of the years 2000–2005*. Wellington: Te Rōpu Rangahau Hauora a Eru Pōmare. Chapter 16, p 225.

⁵⁴ Te Tai Tokerau: Primary Health Organisation. www.ttpho.co.nz/aboutttpho.php (accessed 11 September 2009).

The alliance members collectively deliver a range of primary health care services, including:

- specialist services (kaupapa Māori advanced nurse practice, kaupapa Māori medical support service, and chronic disease management)
- Māori mobile nursing and outreach services
- services to improve access such as tāne (male) Māori cardiovascular screening, GP and nurse practitioner outreach clinics
- tamariki ora (child health) specialist nursing services (for example, immunisation outreach, child injury prevention, and child and adolescent oral health services)
- kaumātua me kuia (older persons) services (for example, residential services, day programmes, home-based supports)
- mental health and addiction services.

Turanga Health's Kaumātua Programme

Turanga Health's (see Appendix 6) Kaumātua Programme is a marae-based programme for kaumātua and kuia that is delivered on a fortnightly basis. The programme has a health focus, providing activities such as tai chi and korikori tinana (physical exercise) and educational talks. Other community-based services are also available (for example, the community law centre can inform people about wills and talk generally about issues with the judicial system). The programme also has a social focus, providing activities such as bowls, cards and waiata. Free transport is provided to and from the programme's venue. Health checks are provided for eyesight and hearing, blood pressure, blood sugar and weight. This marae-based initiative illustrates how community participation in health can be enhanced by shifting the place of health care into a familiar, non-clinical environment.⁵⁵

Health Care Aotearoa

Health Care Aotearoa was formed in 1994 as a Treaty of Waitangi-based national network of non-profit community-driven and -governed primary health care providers. Its aim is to promote accessible primary health care for all people, with a focus on Māori and Pacific peoples, refugees and low-income families.

Health Care Aotearoa has more than 60 member organisations including PHOs, Māori providers, union and community providers, Pacific providers and youth providers. The organisation provides business, technical and expert support to its members, helping achieve efficiencies through information sharing, networking and information technology support.

⁵⁵ Kearns R, Neuwelt P. 2009. Within and beyond clinics: primary health care and community participation. In G Andrews, V Crooks (eds). *Primary Health Care: People, practice, place*. Aldershot: Ashgate Press, pp. 203–220.

Health Care Aotearoa organisations use a range of models of holistic, community-driven health care. A large proportion of the member organisations are rural primary health providers.⁵⁶

Improve the use of technology

Recommendation 5

Work with businesses and other government agencies to improve the availability of technology, including cell phone coverage, the provision of high-speed internet access, telemedicine capability, and other health service technologies in and for rural communities.

Barriers to New Zealand rural health professionals making greater use of the internet for learning include a lack of access to computers, the poor availability of fast internet access, and a lack of information technology knowledge and skills.⁵⁷

Modern technology and recent thinking about models of care offer opportunities to make health services more accessible. Rural health and disability services can lead the way in adopting initiatives that can overcome the challenges of distance. Advances in technology mean some procedures that previously required highly specialised expertise can now be provided in the community or in rural hospitals. Communications technology allows expert advice and support to be provided remotely from specialist centres.

Cell phone coverage and broadband internet are significant issues for rural health services. The Broadband Strategy addresses issues of access to high speed internet. Recently the Government announced that within six years over 80 percent of rural households will have access to broadband with speeds of at least 5 MB per second and the remainder will achieve speeds of at least 1 MB per second. It is hoped that these advances will improve the use of technology and delivery and access to rural health and disability services.

⁵⁶ See the Health Care Aotearoa website, www.hca.org.nz.

⁵⁷ Janes R, Arroll, B, Buetow S, et al. 2005. Rural New Zealand health professionals' perceived barriers to greater use of the internet for learning. *Rural and Remote Health* 5: 436. <http://rrhdeakin.edu.au> (accessed 4 September 2009).

Actions to assist in implementing the recommendations

Recommendation 5: Work with businesses and other government agencies to improve the availability of technology, including cell phone coverage, the provision of high-speed internet access, telemedicine capability, and other health service technologies in and for rural communities.		
Challenge	Suggested action	Who
Improve the use of technology Telephone coverage in rural locations is lacking. Access to the internet and high-speed broadband in rural locations is lacking. Telemedicine's potential is yet to be realised. Medical technologies that would be useful in rural areas are not always within the reach of local providers.	Work with other government sectors to improve phone coverage to rural communities. Encourage regional or national level planning to pool resources and increase demand for broadband services making it financially viable for internet providers to lay cables and enable access. Develop alternative means of providing telemedicine, such as the use of satellite technology. Increase and sustain local diagnostics capacities and capabilities.	Ministry of Health DHBs Primary health organisations Ministry of Economic Development

Examples of local initiatives

Electronic Health Records – West Coast District Health Board

West Coast DHB is developing electronic health records by integrating its two main health information systems (MedTech for primary care and iSOFT for secondary care). West Coast DHB envisages that the project will evolve into a shared electronic health record that includes information from all health providers, so all relevant health information will be available when and where it is required for patient care.

Telemedicine – West Coast District Health Board

West Coast DHB, Cisco Systems Incorporated, and the Ministry of Health have worked together on a telemedicine pilot to evaluate the potential to expand the availability of medical resources to provide patients with convenient and timely access to medical care. Starting in July 2008, the telemedicine pilot allowed real-time visualisation for doctors in Greymouth to examine patients at Westport. The Cisco Health Presence pilot combines video-conferencing with medical telemetry (network-enabled medical devices such as electrocardiograph machines and electronic stethoscopes). A microwave link conveys the information while plans are in place to put in fibre-optic cable. In spite of the difficulties encountered in the establishment phase, staff are enthusiastic about the potential for this project.

Improve public health

Recommendation 6

Work with other central and local government agencies to improve public health infrastructure such as the quality of housing, drinking water, and sewage and waste disposal in rural communities.

The quality of rural people's health is affected by the environment in which they live and work. This includes the quality of housing and work buildings and having a safe energy supply, potable drinking water, fluoridation, and safe sewage and solid waste disposal.

A systematic approach is needed to policy development and planning across all of government in order to improve public health infrastructure in rural communities. The Rural Proofing Tool, Health Impact Assessment, and Whānau Ora Impact Assessment can help to inform policy and implementation. Information and incentives for rural communities are also needed to raise awareness and provide the impetus for projects.

Specific issues include improving oral health and housing. For instance, Northland's oral health status is among the worst in the country and continues to decline,⁵⁸ but the West Coast DHB has the lowest rate of caries-free five-year-old children in New Zealand. Neither of these districts has a fluoridated water supply.

More than half of New Zealand's 1.6 million homes are cold, damp and difficult to heat. In 2004, it was estimated that two-thirds of New Zealand homes have substandard insulation.⁵⁹ Work being done at a national level to address these concerns includes programmes such as the Rural Housing Programme, the Warm up New Zealand: Heat Smart programme, and the Low Deposit Lending Scheme. Rural communities have opportunities to take advantage of these types of initiatives and take local action.

⁵⁸ Northland DHB. 2008. *Annual Report 2007/08*. Whangarei: Northland District Health Board.

⁵⁹ Howden-Chapman P, Carroll P (eds). 2004. *Housing and Health: Research, policy and Innovation*. Wellington: Steele-Roberts.

Actions to assist in implementing the recommendations

Recommendation 6: Work with other central and local government agencies to improve public health infrastructure such as the quality of housing, drinking water, and sewage and waste disposal in rural communities.		
Challenge	Suggested action	Who
Improve public health Health needs are not taken systematically into account by local and regional planning authorities. Co-ordination of local authorities, regional public health units, health funders and providers is poor. Community involvement in public health planning is lacking.	Increase awareness and knowledge among local authorities of local public health problems. Co-ordinate policy development across government using existing guides such as the Rural Proofing Tool and principles underpinning the Primary Health Care Strategy. Where Health Impact Assessments and/or Whānau Ora Impact Assessments have been completed use this information to inform planning of rural health and disability services. Promote, facilitate and/or sufficiently resource a community development approach linked to local authorities' plans to improve rural public health infrastructure. Enable public health units to co-ordinate work across a range of key stakeholders.	Ministry of Health and DHBs to work with local authorities Regional authorities, and other government agencies Public health units with support from DHBs and Ministry of Health
No incentives for local infrastructure development to contribute to improved local health outcomes.	Increase funding for local rural public health initiatives. Disseminate information to rural communities, for example, using information sessions to increase knowledge, skills and motivation for improving rural public health infrastructure.	DHBs in partnership with Ministry of Health working with local authorities
Poor oral health in rural areas.	Ensure DHBs and local authorities work collaboratively to promote fluoridation for all water supplies servicing more than 1,000 people, as per Ministry of Health policy. ⁶⁰ Ensure mobile dental clinics are located close to communities with poor oral health status.	DHBs Local authorities
Poor home heating and substandard insulation.	Ensure low-income families in rural communities can take advantage of Warm Up New Zealand: Heat Smart run by the Energy Efficiency and Conservation Authority (EECA).	Ministry of Health EECA

⁶⁰ Wright J, Bates M, Cutress T, et al (Institute of Environmental Science and Research Ltd). 1999. *The Cost Effectiveness of Fluoridating Water Supplies in New Zealand: A report for the New Zealand Ministry of Health*. Wellington: Ministry of Health.

Example of local initiatives – Nga Puna Wai o Hokianga pilot project

In 1999, the Ministry of Health, through the Hokianga Health Enterprise Trust, funded a project by the Whirinaki community to construct a safe water supply after a severe flood. Whirinaki is a small rural community in South Hokianga where 90 percent of the population are Māori and a large proportion of the population lives on traditional Māori or papakāinga land.

The Ministry of Health approached the Hokianga Health Enterprise Trust to lead a pilot project to provide safe drinking water to marae and communities in the Hokianga. The project, Nga Puna Wai o Hokianga, encompassed 33 marae in the north and south Hokianga areas. Three of those marae were in Whirinaki. Several agencies assisted with the proposal's development and implementation.

In November 2003, the Whirinaki Waterline was officially opened, supplying the community with a constant supply of potable water delivered to 56 households, three churches, three marae, a kōhanga reo, a sport complex, and a kura kaupapa Māori. Subsequently, a community-owned company was established using local labour to carry out further public health infrastructure (housing) work.⁶¹

Improve planning, data collection and research

Use a standard definition of rural

Recommendation 7

Adopt the Statistics New Zealand Urban/Rural Profile classification system across the health sector to describe rurality to enable consistent information gathering, planning and allocation of funding.

The term 'rural' is defined in different ways. This means it is hard to compare information and pinpoint where the greatest rural health and disability needs are and where services should be targeted.

⁶¹ Office for the Community and Voluntary Sector. No date. *Collaboration Case Study: Nga Puna Wai o Hokianga pilot project*. Good Practice Funding website. www.goodpracticefunding.govt.nz/funding-options/contracts/nga-puna-wai-o-hokianga.html (accessed 8 September 2009).

Actions to assist in implementing the recommendations

Recommendation 7: Adopt the Statistics New Zealand Urban/Rural Profile classification system across the health sector to describe rurality to enable consistent information gathering, planning and allocation of funding.		
Challenge	Suggested action	Who
Implement a standard definition of rural Definitions of 'rural' areas are inconsistent.	Advocate for Statistics New Zealand to standardise the use of the Urban/Rural Profile. Adopt the Statistics New Zealand Urban/Rural Profile across the health and disability sector. Improve the quality of address data so the Urban/Rural Profile can be applied. Use the Urban/Rural Profile to inform funding decisions based on reducing inequalities, providing services to those with the greatest need, and evaluating the effectiveness of services.	Ministry of Health Statistics New Zealand DHBs

Improve planning

Recommendation 8 Improve the planning of rural health and disability services by working across district and regional boundaries.

Consideration of rural issues at all levels of the health sector is needed when planning and funding services. Improving equity of access⁶² to health and disability services requires specific focus. Strategic planning needs to include engagement with local communities to understand their local priorities.

⁶² For a definition of 'realised access', see the definition of 'access to services' in the Glossary.

Actions to assist in implementing the recommendations

Recommendation 8: Improve the planning of rural health and disability services by working across district and regional boundaries.		
Challenge	Suggested action	Who
Improve planning More co-ordinated planning for rural services across DHB boundaries and sectors is needed. Better use of current information to inform planning is needed.	Plan for rural areas across DHB boundaries and conduct regular rural health needs assessments to inform planning. Adopt the Rural Proofing Tool developed by the Ministry of Agriculture and Forestry for assessing the impact of specific policies and initiatives on rural communities. ⁶³ For health policies, use the Health Equity Assessment Tool or an equivalent tool to help focus attention on service users most in need. ⁶⁴ Conduct Health Impact Assessments and Whānau Ora Impact Assessments to understand the likely health effects of new policies on rural communities. ^{65, 66, 67} Combine resources across DHBs where appropriate to provide efficient and effective rural health and disability services. Involve communities in health services planning. Plan at a regional level for the provision of infrastructure such as telecommunications and transport services and for highly specialised or high-cost services.	Ministry of Health DHBs Primary health organisations Local and iwi authorities

Assessment of rural health needs

Recommendation 9 Require DHBs as part of their regular needs assessment to regularly assess the health needs of their rural communities and the responsiveness of services within their districts. Explicit assessment of health needs should include the whole rural population as well as a focus on: 9.1 the needs of rural Māori 9.2 the disability-related needs of rural communities 9.3 the needs of communities in areas with high socioeconomic deprivation 9.4 the needs of communities in Highly Rural/Remote Areas.

⁶³ Ministry of Agriculture and Forestry. 2008. *Rural Proof Your Policy: A guide for government policy advisers*. Wellington: Ministry of Agriculture and Forestry.

⁶⁴ See Ministry of Health. 2004. *A Health Equity Assessment Tool (Equity Lens) for Tackling Inequalities in Health*. Wellington: Ministry of Health. www.moh.govt.nz/moh.nsf/pagesmh/3968.

⁶⁵ Public Health Advisory Committee. 2007. *A Guide to Health Impact Assessment* (2nd edition). Wellington: Ministry of Health.

⁶⁶ See Ministry of Health. 2009, updated 29 September. *Health Impact Assessment in New Zealand*. www.moh.govt.nz/hiasupportunit

⁶⁷ Ministry of Health. 2007. *Whānau Ora Health Impact Assessment*. Wellington: Ministry of Health.

Consistent useful information on rural health, particularly information that informs health status and the effectiveness of services, is lacking.

In a 2008 report published, *Ministry of Health: Monitoring the progress of the Primary Health Care Strategy*, the Auditor-General indicated that more coherent and complete information is needed.⁶⁸ This is true particularly for information about rural health status and the effectiveness of rural health and disability services. This inadequacy could be addressed in part by including rurality as a dimension of analysis in the Ministry of Health's regular reporting of the New Zealand Health Survey. To provide comparable information, the analysis should be based on the Statistics New Zealand Urban/Rural Profile.

Actions to assist in implementing the recommendations

Recommendation 9: Require DHBs as part of their regular needs assessment to assess the health needs of their rural communities and the responsiveness of services within their districts. Explicit assessment of health needs should include the whole rural population as well as a focus on: <ul style="list-style-type: none"> 9.1 the needs of rural Māori 9.2 the disability-related needs of rural communities 9.3 the needs of communities with high socioeconomic deprivation 9.4 the needs of communities in Highly Rural/Remote Areas. 		
Challenge	Suggested action	Who
Improve the evidence base There is insufficient comparative data about rural health status and the effectiveness of services in meeting rural communities' needs, specifically the needs of: <ul style="list-style-type: none"> • rural Māori • rural people with disabilities • communities in the areas of highest socioeconomic deprivation • communities in Highly Rural/Remote areas. 	Include rurality as a dimension of analysis in the Ministry of Health's regular reporting of the New Zealand Health Survey. Develop a Rural Index or a New Zealand-specific set of rural health indicators. Develop rural Māori health status indicators and include rurality as a dimension of analysis in the Ministry of Social Development's regular reporting of the New Zealand Disability Survey.	Ministry of Health working with DHBs Ministry of Social Development

⁶⁸ Office of the Auditor-General. 2008. *Ministry of Health: Monitoring the progress of the Primary Health Care Strategy*. Wellington: Office of the Auditor General.

Support and fund ongoing research

Recommendation 10

Support and fund ongoing research to develop an evidence base to inform the improvement of rural health and disability services.

New Zealand's overall commitment to rural health research needs strengthening. Further research is required to establish evidence about the health status of rural populations and the effectiveness of services in meeting the needs of rural communities.

Actions to assist in implementing the recommendations

Recommendation 10: Support and fund ongoing research to develop an evidence base to inform the improvement of rural health and disability services.		
Challenge	Suggested action	Who
Improve the evidence base There is insufficient comparative data about rural health status and the effectiveness of services in meeting rural communities' needs, specifically the needs of: <ul style="list-style-type: none"> • rural Māori • rural people with disabilities • communities in areas of highest socioeconomic deprivation • communities in Highly Rural/Remote Areas. 	Direct the Health Research Council to make rural health a priority area of research. Develop further develop existing rural health centres of excellence to enable the dissemination of research and evaluation of information to those providing services. Encourage universities and academic institutions to partner with rural communities to develop rural health centres of excellence and learning.	Ministry of Health Health Research Council

Appendices

Appendix 1: Development of New Zealand health services from 1840 to 1999 and their impact on rural areas

Introduction

This appendix overviews key legislative provisions, policies and programmes of government in New Zealand from 1840 to 1999 as they affected access to health services in rural areas. Themes from the past are recognisable today. These include the challenge of distance, diverse Māori and non-Māori experiences, the tension between local control and central decision-making, and the need to look to non-traditional business models to deliver some rural health services. Understanding where we have come from helps provide direction for the future.

The ways in which communities have generated their own solutions to challenges vary from place to place, illustrating the need for policies to be flexible in order to support community resilience.

British Government response to early settler needs

Medical care for the early Pākehā settlers was sporadically available from missionaries and a small number of doctors who immigrated to New Zealand. From 1841, the British Government began to post State-funded doctors to remote regions in recognition of an expanding settler population.

Pākehā settlers wanted access to a general practitioner (GP) who, in the late 19th and early 20th centuries, usually dispensed medicines, undertook deliveries and could handle straightforward medical and surgical procedures. Friendly Societies⁶⁹ had arrangements with GPs and pharmacies to subsidise the cost of care for families who belonged to the societies. Settlements based on hazardous industries such as mining and bush felling wanted some form of medical security. If the market could not or would not provide such care, then communities looked to the State to provide them with a small hospital equipped

⁶⁹ Freemasonry Lodges formed Friendly Societies in the early years of settlement in New Zealand. In 1854 a Friendly Society Act was introduced. The purpose of Friendly Societies was to raise by voluntary subscriptions of the members funds for the purpose of 'affording relief and maintenance' to provide a range of benefits including a sickness benefit, a death benefit and provision whereby, 'for a small sum, the member, his wife and children could obtain the services of a doctor without charge and to obtain any medicines, free of cost, that might be prescribed'. Later, benefits to assist with hospital expenses were introduced: Freemasonry and friendly societies. 1966, updated 23 April 2009. In A H McLintock (ed). *An Encyclopaedia of New Zealand*. Te Ara: The Encyclopedia of New Zealand. www.teara.govt.nz/1966/F/FreemasonryAndFriendlySocieties/FriendlySocieties/en.

with facilities that might induce a doctor to settle in the locality. Political demands for a local public hospital occurred alongside pressures for a local post and telegraph office, police, or a primary school.⁷⁰

The early settlers expected to be able to establish a health system similar to that in Britain, consisting of voluntary hospitals for the poor who would be 'nominated' by wealthy benefactors or philanthropic subscribers. This did not eventuate. The wide dispersion of early settlements throughout the country and the 'general tendency on the part of the colonists to leave things to be done by the Government'⁷¹ led to the State intervening in the funding and provision of health and hospital services.

Early legislation to standardise hospital administration

The introduction of the Hospitals and Charitable Institutions Act 1885 drew on developments in the Otago and Thames goldfields and established the pattern for New Zealand's hospital system that in the main has continued. It acknowledged the State's role in health provision while attempting to limit its increasing contribution to health funding.⁷²

The original Bill divided the country into 12 hospital districts based on a rationalisation of the provinces. However, by the time legislation was passed, the number of districts had increased to 28. Hospitals were to be financed by patient fees, and, it was hoped, by donations, the balance being supplied by local rates with a government subsidy. Several 'separate institutions' received money from the rates as well as government subsidies and continued in independent existence. In effect, two separate systems existed together.⁷³

Hospital administration continued to fragment, from 28 districts in 1885 to a peak of 47 in 1926.⁷⁴ Hospitals that could raise community financial support had their own elected board structure. New hospitals were usually placed under new hospital boards formed by subdividing an existing hospital district. If not, a local community had some say in the running of its own institution if the board set up a local hospital committee.⁷⁵

⁷⁰ Brunton W. 2009. *Review of rural health services history for the National Health Committee* (unpublished).

⁷¹ Department of Health. 1975. *A Health Service for New Zealand*. Wellington: Government Printers. p 12.

⁷² Gauld R. 2001. *Revolving Doors: New Zealand's health reforms*. Wellington: Institute of Policy Studies and Health Research Centre, Victoria University of Wellington. p 10.

⁷³ Dental profession and services. 1966, updated 22 April 2009. In A H McLintock (ed). *An Encyclopaedia of New Zealand*. Te Ara: The Encyclopedia of New Zealand. www.teara.govt.nz/1966/M/MedicalServices/Hospitals/en

⁷⁴ Department of Health. 1975. *A Health Service for New Zealand*. Wellington: Government Printers. Appendix III.

⁷⁵ Brunton W. 2009. *Review of rural health services history for the National Health Committee* (unpublished).

Early legislation for public health administration

The state of health among the Pākehā settler population was far from satisfactory. Sanitation was of great concern, with little infrastructure in place for sewage management. There were also concerns about the state of health of Māori and the conditions in which they were living. The early focus for public health, therefore, was on improving sanitation and overall living conditions and containing and managing infectious disease outbreaks.

The Public Health Act 1872 established a Central Board of Health in each province.⁷⁶ Before this, various pieces of legislation dealt with quarantine, contagious diseases and public vaccination. For example, the Vaccination Act 1863 provided for a network of vaccination stations with medical officers in attendance at specified times. The provision of early public health measures for Māori was regarded as a ‘paramount duty’ owed by those of a ‘superior civilisation’⁷⁷ with warnings that any epidemic among the Māori would also affect the settler population. This was a predominant motivator for public health through to the 20th century.

The Public Health Act was updated in 1876 following the abolition of the provinces. It provided for local authorities to act as local Boards of Health and to appoint officers. The provincial Boards of Health were replaced with one central Board of Health. The local boards were required to report to the central board and to publish and implement any of its regulations. In reality, the central board was largely ineffectual. Local boards were given considerable control over areas such as sanitation, infectious diseases and food hygiene.⁷⁸

By the late 1890s, there was consistent and widespread public concern about the state of public health in New Zealand. The situation came to a head in 1900 when bubonic plague threatened New Zealand, and it was realised that the Public Health Act 1876 was insufficient for authorities to respond adequately.

Public Health Act 1900

The Public Health Act 1900 established a central Department of Public Health. Local authorities continued to be responsible for public health in their own areas, but the country was divided into six health districts – Auckland, Hawke’s Bay (including the East Coast), Wellington, Westland (including Nelson–Marlborough), Canterbury and Otago. Each district was under the control of a district health officer who was given such powers that in matters of

⁷⁶ Department of Health. 1975. *A Health Service for New Zealand*. Wellington: Government Printers. p 14.

⁷⁷ Dow DA. 1995. *Safeguarding the Public Health: A history of the New Zealand Department of Health*. Wellington: Victoria University Press. pp 30–31.

⁷⁸ This early public health legislation illustrates how the prevailing English statute was transplanted and superimposed on the provincial and post-provincial systems of the day with scant regard to the geographical and functional fragmentation of government. Irrespective of size, small municipalities and counties were responsible for providing these services when they lacked an adequate financial and population base to do so. See Brunton W. 2009. Review of rural health services history for the National Health Committee (unpublished).

public health the local authorities had little scope for independent action.⁷⁹ Dr Maui Pomare was appointed to the Department of Public Health as the Chief Native (Māori) Health Officer in 1901 and was tasked with improving sanitation among the predominantly rural Māori communities.

Department of Public Health, Hospitals and Charitable Institutions (1909)

A planning strategy, based on regional hospitals, associated outlying hospitals and extramural services was first enunciated in 1909/10 in an attempt to respond to the proliferation of small rural hospitals and reduce the number of hospital boards.⁸⁰ The new department became responsible for the supervision of hospitals, charitable institutions, and private hospitals, and for the control of nurses and midwives.⁸¹

Mobile services for backblocks

The New Zealand district-nursing scheme began in 1909 in Taranaki. The scheme included the native health nursing service (renamed the Māori health nursing service in 1922). Nurses were appointed by the Department of Public Health, Hospitals and Charitable Institutions and stationed in or near Māori settlements to provide nursing and health education.⁸² Horses and cars provided the means for getting around and serving outlying areas. District nurses and native health nurses worked from the same office, which encouraged collegial and professional support with each nurse having her own 'parish'.⁸³ The district-nursing scheme was an important innovation that has survived in both rural and urban areas.

Social Security Act 1938 and Special Medical Areas

The proposal for free and universal GP services created considerable and lasting conflict between government and the medical profession resulting in the Government changing its approach. Instead the General Medical Service (GMS) benefit under the Social Security Amendment Act 1941 was introduced, providing for a GP service on a fee-for-service basis, payable by the Department of Health with a contribution from the patient.⁸⁴ An additional allowance was provided for GPs based in rural areas. The Government was unable to

⁷⁹ Department of Health. 1975. *A Health Service for New Zealand*. Wellington: Government Printers. p 23.

⁸⁰ Brunton W. 2009. *Review of rural health services history for the National Health Committee* (unpublished).

⁸¹ The Midwives Registration Act 1904 provided for the registration of midwives and gave authority for the establishment of one or more State maternity hospitals for the training of midwives.

⁸² Maclean H. 1932. *Nursing in New Zealand: History and reminiscences*. Tolan Printing Company. p 88. www.nzetc.org/tm/scholarly/tei-MacNurs-t1-body-d16.html.

⁸³ Brunton W. 2009. *Review of rural health services history for the National Health Committee* (unpublished).

⁸⁴ Dow DA. 1995. *Safeguarding the Public Health: A history of the New Zealand Department of Health*. Wellington: Victoria University Press. p 122.

achieve service integration between primary and hospital-based services, or between the public and private sectors, and was unable to establish equity of access.⁸⁵ Policy-making and administration of health services became increasingly complex.

Section 82 of the Social Security Amendment Act 1941 introduced General Practitioner Services in Special Areas (later known as Special Medical Areas (SMAs)) and was intended to attract and retain GPs in rural communities and to ensure people in these areas could access health services. Thirty-four SMAs were named in 1941. At first, payment was by capitation but in the 1950s, this was changed to a fixed salary paid by the Department of Health in most places.⁸⁶ In some SMAs, the salaried GP operated from a local hospital (such as Rawene Hospital in the Hokianga and Te Puia Hospital in Tairāwhiti) and maintained a network of clinics to more remote areas in conjunction with a district nurse.⁸⁷

Listed below are the key features of SMAs.

- Patients received free GP consultations and pharmaceuticals.
- SMAs were served by a salaried special area medical officer paid by the Department of Health with their activity administered by the local hospital board. Special area medical officers were provided with free accommodation (both clinical and residential), six weeks' paid annual leave and a three-month sabbatical every five years (these conditions were designed to attract overseas, mainly British, doctors).⁸⁸
- SMAs did not necessarily represent the most medically needy areas. However, they were areas where it would not be financially viable to establish a private medical practice due to any combination of geographical isolation, a small population spread over a wide area, economic depression, and unfavourable climatic conditions. Attracting a GP to these areas without incentives was considered problematic due to professional isolation, demanding on-call workloads, and difficulty finding locums to cover for illness, time off and attendance at clinical meetings or study courses.
- Designation of SMAs was at the discretion of the Minister of Health, as was disestablishment.⁸⁹

⁸⁵ Gauld R. 2001. *Revolving Doors: New Zealand's health reforms*. Institute of Policy Studies and the Health Research Centre, Victoria University of Wellington. p 18.

⁸⁶ Ministry of Health. 2004. *Primary Health Care in Community-Governed Non-Profits: The work of doctors and nurses: The National Primary Medical Care Survey (NatMedCa): 2001/02 Report 3*. Wellington: Ministry of Health.

⁸⁷ Health Services Research Centre, Victoria University of Wellington. 2006. *Rural Health: A literature review for the National Health Committee*. Wellington: Victoria University of Wellington. p 26.

⁸⁸ Planning and Funding Division, Canterbury DHB. 2002. *Rural Health in Canterbury DHB: An action plan – Background information and a proposal for the way forward*. Christchurch: Canterbury DHB. p 19.

⁸⁹ Department of Health. 1990. *Review of Assistance for Delivery of Primary Care Services to Areas of High Health Need*. Memorandum (September). Wellington: Department of Health.

- Some special area medical officers employed practice nurses and initially could receive a 100 percent subsidy for nurses' wages. Special area medical officers could claim maternity benefits (and Accident Compensation Corporation payments after 1974), and if they dispensed medicines they were reimbursed the costs of medicines and paid a service fee for each prescription.⁹⁰

In 1967, 23 SMAs remained. In 1968, a medical practitioners' assisted passage scheme was initiated to recruit suitable doctors from Britain for bonded service in designated rural areas.⁹¹ By the late 1960s, it had become the Department of Health's policy to remove the designation of SMAs whenever feasible because, although they were regarded by many to be successful in meeting the needs of people,⁹² particularly in remote rural areas, not all such areas were designated. By 1974, there were 19 SMAs, and by 1985 only 12 remained.⁹³ Designation of SMAs had ceased to be part of government policy by 1993.

Responsibility for funding SMAs was transferred from the Department of Health to Area Health Boards in 1991. The Department of Health then reimbursed the boards. SMAs ceased to exist as legal entities when the Health Reforms (Transitional Provisions) Act 1993 repealed section 117 of the Social Security Act 1964. Policy guidelines to Regional Health Authorities stated the current user regime continued to apply unless the Minister of Health approved a variation proposed by the Regional Health Authorities. After 1993 the responsibility for maintaining the arrangements for SMAs was transferred to Regional Health Authorities and became administered through Crown Health Enterprises.⁹⁴

Developments beyond Special Medical Areas

By the 1960s New Zealand's population, including Māori and Pākehā, was predominantly urban. Rural primary health services found it increasingly difficult to recruit and retain medical staff, especially in remote and isolated areas.

An initiative intended to address these issues was introduced in the Social Security Act 1964. The Guaranteed Minimum Income (GMI) scheme provided additional funding (above the GMS benefit) for rural GPs who were not receiving a viable income as a result of small patient numbers. Very few of these top-ups were ever made. However, in later years, some SMAs disestablished after 1993 did take up this funding (eg, Great Barrier Island).⁹⁵

⁹⁰ Marwick J, Fougere G, Scott C. 1986. *Choices for Health Care: Report of the Health Benefits Review*. Wellington: Department of Health. p 137.

⁹¹ Department of Health. 1975. *A Health Service for New Zealand*. Wellington: Government Printers. p 51.

⁹² Flight R, Snelgar D. 1986. *Primary Health Care in Northland: A comparative study of a special area and a fee for service area*. Occasional Paper 29. Wellington: Department of Health.

⁹³ Mehl A. 1986. *A Survey of Special Areas of New Zealand* (unpublished). Department of Community Health, Wellington Clinical School of Medicine.

⁹⁴ Provided for under the Health and Disability Services Act 1993.

⁹⁵ Marwick J. 1993. *Alternatives to GMS: Considering the issues*. Wellington: Department of Health. p 3.

As an alternative to the SMAs, the Rural Incentive Scheme for rural medical practitioners was recommended by the Working Party on Rural Medical Services in 1969 and introduced on 1 January 1970. It provided:

- Housing Corporation loan finance for local authorities that provided housing or surgery accommodation in designated rural areas
- a rural practice bonus of 10 percent on the GMS benefit and 25 percent on the GMS vehicle allowance
- a telephone consultation benefit for patients
- a subsidy for GPs towards the cost of employing a locum (\$100 per week for a maximum of one week if a GP was taking leave for recreation purposes, and \$150 per week for a maximum of one week if a GP was taking study leave)
- a motor vehicle allowance for rural practitioners attending clinical meetings and study courses at base hospitals.⁹⁶

These were important initiatives as they represented the first incentives available for all rural GPs; apart from SMA doctors who were ineligible to apply for these extra rural incentives because they were on a fixed salary and received other benefits.

In 1970, a practice nurse subsidy was introduced to subsidise the salary costs (50 percent) of employing nurses in rural practices. In 1974, it was extended to urban practices at a 100 percent subsidy rate, while the rural rate remained at 50 percent. In 1977, the full 100 percent practice nurse subsidy became available to all practices.⁹⁷

State sector reforms and rural health services

The removal of agricultural subsidies and the restructuring of public sector services from the mid-1980s had a significant impact on rural communities. Many areas experienced an economic downturn, declining populations and the withdrawal of many services, including banks, post offices and schools. Rural health services were no exception.

Community trusts emerged in the late 1980s as a response to the threats of closure of several rural hospitals throughout the country. By the 1990s, trusts were being developed with some government support as an alternative mechanism for the ownership of health services in rural areas.

⁹⁶ Marwick J, Fougere G, Scott C. 1986. *Choices for Health Care: Report of the Health Benefits Review*. Wellington: Department of Health. p 137.

⁹⁷ Marwick J, Fougere G, Scott C. 1986. *Choices for Health Care: Report of the Health Benefits Review*. Wellington: Department of Health. p 138.

Community trusts were seen as a viable option for many of the 57 public hospitals with fewer than 50 beds that were operating at that time. Trusts encouraged community involvement in decision-making⁹⁸ and assisted the development of 'by Māori for Māori' providers. The services most likely to form into trusts included long-term aged care facilities, maternity services, GP clinics and bases for visiting specialists. Trusts contracted directly with Regional Health Authorities or Crown Health Enterprises.

The requirement for Hospitals and Health Services (previously Crown Health Enterprises) to be business-like resulted in selected services being considered 'non-core business'. Hospitals and Health Services continued to withdraw from the provision of services in provincial and rural hospitals. The ownership of some of these services was taken over by private and community providers, including community trusts. Financial assistance was available to community trusts through the Community Trust Assistance Scheme. By 1999, approximately \$18 million had been allocated through this scheme.

Conclusion

Rural New Zealand in 2009 is very different from rural New Zealand in the mid-1800s with the development of infrastructure such as roads, and the introduction and advancement of technologies, including telecommunications. However, ensuring access to health services in rural areas, especially remote rural areas, remains challenging and complex.

⁹⁸ Gauld R. 2001. *Revolving Doors: New Zealand's health reforms*. Wellington: Institute of Policy Studies and Health Research Centre, Victoria University of Wellington. p 88.

Appendix 2: Features of rural New Zealand

Statistics New Zealand's Urban/Rural Profile – What is 'rural'?

This section describes demographic differences among the Statistics New Zealand Urban/Rural Profile areas (which are described more fully in Appendix 7).

For the purposes of the National Health Committee (NHC) Rural Communities and Health Project, four of the seven categories in the Statistics New Zealand Urban/Rural Profile are defined as 'Rural', because they represent locations that are relatively independent from Main Urban Areas.

- **Highly Rural/Remote Areas:** These areas have minimal dependence on urban areas in terms of employment. They cover 48.4 percent of New Zealand's land area, are home to 1.6 percent of the population, and have a population density of 0.5 people per square kilometre.
- **Rural Areas with Low Urban Influence:** The majority of the population in these areas works in a rural area. These areas cover 35.8 percent of New Zealand's land area, are home to 5.5 percent of the population, and have a population density of 2.3 people per square kilometre.
- **Independent Urban Areas:** These areas have little or no connection to a Main Urban Area, are often service centres for the surrounding rural communities, and have an interdependent relationship with them. The NHC considers these features most relevant to the question of access to rural health services. Independent Urban Areas are the least affluent of the seven categories.
- **Rural Areas with Moderate Urban Influence:** In these areas a large percentage of the resident employed population works in a minor (population of 1,000–9,999) or secondary (population of 10,000–29,999) urban area, or a significant, but smaller, percentage works in a main urban area. These areas are a lesser focus of this report, sharing some qualities with more remote communities and some with peri-urban communities.

This NHC report defines as 'Urban' the three Urban/Rural Profile categories:

- **Main Urban Areas** (population of 30,000 and over)
- **Satellite Urban Areas** (towns with 20 percent or more of the population working in Main Urban Areas)
- **Rural Areas with High Urban Influence**, which are near Main Urban Areas and the services they provide.

For the purposes of this report the NHC, has sometimes consolidated Main Urban Areas, Satellite Urban Areas and Rural Areas with High Urban Influence into a single category labelled 'Urban'.

Demographic trends

From 1850 to 1950, New Zealand's rural and urban populations changed significantly and rapidly. During the 19th century, vast amounts of land changed hands and the Māori population dwindled. The nation's economic base was firmly established in agriculture, and a rural settler identity took hold.

A population shift to the cities throughout the 20th century meant New Zealand became highly urbanised. Between 1881 and 2001 New Zealand's rural population grew 83 percent, but the urban population grew 1,500 percent. The Māori population migrated even more dramatically than the Pākehā population from rural to urban areas between the 1930s and 1960s.⁹⁹

Urbanisation, a rapidly changing economic base and the proliferation of lifestyle blocks within commuting distance of main cities have shifted the boundaries between rural and urban New Zealand. Towns surrounding cities and their commuter belts such as Helensville, Pukekohe and Rangiora were once regarded as rural centres but are now seen as Satellite Urban Areas by the Statistics New Zealand Urban/Rural Profile.

Statistics New Zealand has identified growth in rural areas near cities or peri-urban areas as the greatest single change to affect rural New Zealand in the 30 years to 2006.

Some people within the commuter belt, particularly in Rural Areas with High and Moderate Urban Influence, now enjoy a different sort of lifestyle. Work and commuting practices, telecommunications and electronic media development mean many who live in a rural area enjoy benefits formerly associated with city living, and often draw an urban income as well. At the same time similar-sized communities far from cities (Independent Urban Areas) are more vulnerable to the closure of major industry such as their freezing works or dairy factory than a larger, more diverse local economy might be.

The rural population, about 882,000 people (22 percent of the country), is projected to grow about 2 percent per year to 2026 while the urban and peri-urban population grows far more rapidly, particularly in the Auckland area.

⁹⁹ For more on this, see Statistics New Zealand. No date. *Historical Context*. www.stats.govt.nz/publications/businessperformanceenergyandagriculture/urban-rural-profile/historical-context.aspx

Key features: A summary

Rural population distribution and growth differs between the North Island and South Island. In the South Island 3.6 percent (34,788) of the population lives in Highly Rural/Remote Areas but in the North Island only 1 percent (29,394) live in Highly Rural/Remote Areas.¹⁰⁰ Rural Areas with High Urban Influence grew at a faster rate from 1996 to 2006 in the South Island. The rate of decline in Highly Rural/Remote Areas was greater in the North Island.¹⁰¹

Age

The median age of the population is higher in rural than in urban areas, in spite of rural populations' larger proportions of children. The largest population cohort in rural New Zealand is people aged 40 to 64. Over the coming 20 years, the median age of the rural population will be even higher as this ('baby boom') generation ages.

Many young adults (18–29 years) leave rural areas for education, employment and social opportunities, which leaves such areas with a smaller share of this age group.

The proportion of the population that is working age (15–64 years) is lowest in Independent Urban Areas and Satellite Urban Areas.

Ethnicity

European/Pākehā and Māori comprise 71 percent and 18 percent of the rural population respectively. People identified as Asian or Pacific in the Census of Population and Dwellings each make up about 1 percent of the population in rural areas. The remainder fall into a category called 'other'.

Ethnicity distribution among rural categories varies significantly with Highly Rural/Remote Area and Independent Urban Areas having larger proportions of Māori than other areas.

In comparison with the non-Māori population, the Māori population (rural and urban) is younger with:

- a larger proportion of children and young people (under 20 years)
- a smaller proportion of people aged over 45, and particularly over 60.

Older Māori make up a larger proportion of the rural Māori population than the urban Māori population. A quarter of rural Māori are aged 45 and over compared with 18 percent of urban Māori.

¹⁰⁰ Statistics New Zealand. 2008. Data tables: People (People.xls). *New Zealand: An Urban/Rural Profile Update*. www.statistics.govt.nz/publications/businessperformanceenergyandagriculture/urban-rural-profile-update.aspx.

¹⁰¹ Ministry of Agriculture and Forestry. 2008. *The demographic trends and issues affecting the rural population*. Presentation by Gavin Forrest and Parnell Trost. Wellington: Ministry of Agriculture and Forestry.

Socioeconomic status

Rural Areas with High Urban Influence are the least deprived category on the urban–rural continuum: almost half of their residents are in the lowest quintile of deprivation (least deprived) and three-quarters are in the lowest two quintiles.

Among the rural areas the distribution of deprivation varies regionally, but generally Independent Urban Areas and Highly Rural/Remote Areas have the largest proportions living in higher deprivation and Rural Areas with Moderate Urban Influence have the lowest. Highly Rural/Remote Areas and Rural Areas with Low Urban Influence are similar in socioeconomic composition.

Disparities in income by ethnicity persist in every area with the largest gap found in Highly Rural/Remote Areas. The lowest median personal incomes for Māori are in Highly Rural/Remote Areas (\$16,400) and Rural Areas with Low Urban Influence (\$18,000). (The national median personal income is \$24,400.)

Māori are disproportionately over-represented among high deprivation populations but even more so in rural areas. More than half of the population in quintile five in Highly Rural/Remote Areas, Rural Areas with Low Urban Influence and Rural Areas with Moderate Urban Influence are Māori (compared with a quarter of quintile five in Main Urban Areas).

In rural areas, around 70 percent of the population is employed. Among the Urban/Rural Profiles, employment is lowest in Independent Rural Areas. More than 40 percent of the population in Independent Rural Areas is unemployed or not in the labour force.

Educational attainment is lowest overall in Highly Rural/Remote Area and Rural Areas with Low Urban Influence, Independent Urban Areas and Satellite Urban Areas, and highest overall in Main Urban Areas and Rural Areas with High Urban Influence.

Transport and telecommunications

Rural households are more likely than urban households to have a motor vehicle, but households in Independent Urban Areas are most likely (9.1 percent) to lack any vehicle. Forty percent of households in Independent Urban Areas and 34 percent of households in Highly Rural/Remote Areas have access to only one vehicle.

Three percent of households in Rural Areas with Low Urban Influence and 4 percent of those in Highly Rural/Remote Areas have no phone. Fifty-two percent of rural households have internet access (compared with 59.9 percent of Urban households).

Rural New Zealand in profile

Rural population density and distribution

The rural population makes up about 22 percent of the total population of New Zealand. This includes the four categories described above.

Remoteness and distance are not distributed equally around rural New Zealand. Highly Rural/Remote Areas take up almost half the nation's land area, and their population is distributed at the rate of 0.5 people per square kilometre (see Table 1).

Highly Rural/Remote Areas have the most significant gender imbalance, with more men than women, a reflection of the predominance of employment traditionally dominated by men (see Table 1).¹⁰²

Table 1: Population density, deprivation and gender ratio

Urban-Rural Profile category	Proportion of New Zealand ¹ (%)	Population density ²	Proportion in lowest NZDep quintile (%)	Proportion in highest NZDep quintile (%)	Proportion male (%)
Highly Rural/Remote Area	1.6	0.5	13.8	15.2	53.2
Rural Area with Low Urban Influence	5.5	2.3	16.3	12.2	51.5
Rural Area with Moderate Urban Influence	3.8	6.3	28.6	8.3	50.8
Independent Urban Area	11.0	266.2	10.3	26.3	48.4
Rural Area with High Urban Influence	3.1	12.5	49.1	2.6	50.6
Satellite Urban Area	3.2	292.1	13.4	24.3	48.5
Main Urban Area	71.8	569.8	21.2	20.7	48.4
New Zealand	100.0	15.3	20.0	20.0	48.8

Notes

NZDep = New Zealand Index of Deprivation.

1 Census of Population and Dwellings, 2006, usually resident population. New Zealand total excludes 'Area outside Urban/Rural Profile' category.

2 Number of people per square kilometre.

Source: Ministry of Agriculture and Forestry. 2008. The demographic trends and issues affecting the rural population. Presentation by Gavin Forrest and Parnell Trost, Ministry of Agriculture and Forestry; Statistics New Zealand. 2008. Data tables: People (People.xls). *New Zealand: An Urban/Rural Profile Update*. www.statistics.govt.nz/publications/businessperformanceenergyandagriculture/urban-rural-profile-update.aspx; Statistics New Zealand. 2009, Census 2006 by rural/urban profile. Job ID: EWJ24689.

¹⁰² Statistics New Zealand. 2004. *New Zealand: An urban/rural profile* (report). Wellington: Statistics New Zealand. www.stats.govt.nz/Publications/BusinessPerformanceEnergyAndAgriculture/urban-rural-profile.aspx.

The population is distributed differently in the North and South Islands. The South Island has larger proportions living rurally: 3.6 percent (34,788) of South Island residents compared with 0.96 percent (29,394) of North Island residents live in Highly Rural/Remote Areas. Another 4.7 percent (145,284) of North Island residents live in Rural Areas with Low Urban Influence compared with 7.8 percent (75,186) of South Islanders. In the South Island 18.1 percent (175,170) of inhabitants live in Independent Urban Areas, while in the North Island the figure is 8.7 percent (267,087).

Māori make up 7.6 percent of the South Island population compared with 16 percent of the North Island. A third of South Island Māori live rurally compared with 28 percent in the North Island.

Population change

The rural population as a proportion of the New Zealand total population is projected to shrink gradually as the vast majority of growth is projected to occur in Main Urban Areas, particularly in the Auckland region (see Table 2).

In the years to 2026, Main Urban Areas and the areas relatively closer to them (Satellite Urban Areas and Rural Areas with High and Moderate Urban Influence) are projected to grow steadily while more remote areas and Independent Urban Areas are projected to remain more or less the same size.¹⁰³

¹⁰³ When considering population projections by Urban/Rural Profile, it is important to note that each profile is dispersed across the country, rather than having been analysed as a single area. It will be necessary to test the accuracy of current methods for estimating population growth within the conventions of the Urban/Rural Profile.

Table 2: Population by Urban/Rural Profile, 1996–2026¹

Urban/Rural Profile category	Population 1996 ²	Population change (actual 1996–2006) (%)	Population 2006 ³	Estimated resident population 2006 ⁴	Population change (projected 2006–2016) (%)	Estimated resident population 2016	Population change (projected 2016–2026) (%)	Estimated resident population 2026
Highly Rural/ Remote Rural Area	69,786	-8.0	64,182	66,000	1.2	66,800	-0.6	66,400
Rural with Low Urban Influence	217,008	1.6	220,470	226,500	5.0	237,800	2.6	244,100
Independent Urban Area	438,147	0.9	442,257	454,300	1.1	459,100	-1.6	451,700
Rural with Moderate Urban Influence	139,314	11.2	154,968	159,500	10.3	175,900	7.9	189,800
Total Rural	864,255	2.0	881,877	906,300	3.7	939,600	1.3	952,000
Rural with High Urban Influence	98,760	25.8	124,251	128,000	16.4	149,000	13.2	168,700
Satellite Urban Area	112,845	13.5	128,094	132,400	11.0	146,900	8.0	158,600
Main Urban Area	2,540,661	13.9	2,892,810	3,017,000	11.1	3,352,200	9.2	3,659,200
Total Urban	2,752,266	14.3	3,145,155	3,277,400	11.3	3,648,100	9.3	3,986,500
Grand total	3,616,521	11.3	4,027,032	4,183,700	9.7	4,587,700	7.6	4,938,500
Proportion rural (%)	24		22	22		21		19

Notes: Census of Population and Dwellings figures are not italicised; estimated resident population figures are italicised.

1 2006-base, medium series. All projections produced by Statistics New Zealand according to methods and assumptions agreed to by the National Health Committee.

2 The 1996 Census of Population and Dwellings usually resident population.

3 The 2006 Census of Population and Dwellings usually resident population.

4 'Estimated resident population' is larger than 'census usually resident population' because it refers to the estimated resident population three months later than the census; adds the 'undercount:' people who would have been missed on census night because they were, for example, overseas; and accounts for estimated differences in birth, death and migration. Most of this undercount is assumed to reside in Main Urban Areas. Estimated resident population is estimated at a national level, then broken down into smaller geographic areas. To arrive at these figures, the estimated resident population was broken down into meshblocks, then rebuilt into Urban/Rural Profile categories.

Source: Ministry of Agriculture and Forestry. 2008. The demographic trends and issues affecting the rural population. Presentation by Gavin Forrest and Parnell Trost, Ministry of Agriculture and Forestry; Statistics New Zealand. 2008. R-U Profile Census 06 People.xls; Statistics New Zealand. 2009. Job ID: KID24650 (projections). Excludes 400 residents in 'Area Outside Urban/Rural Profile'.

Age

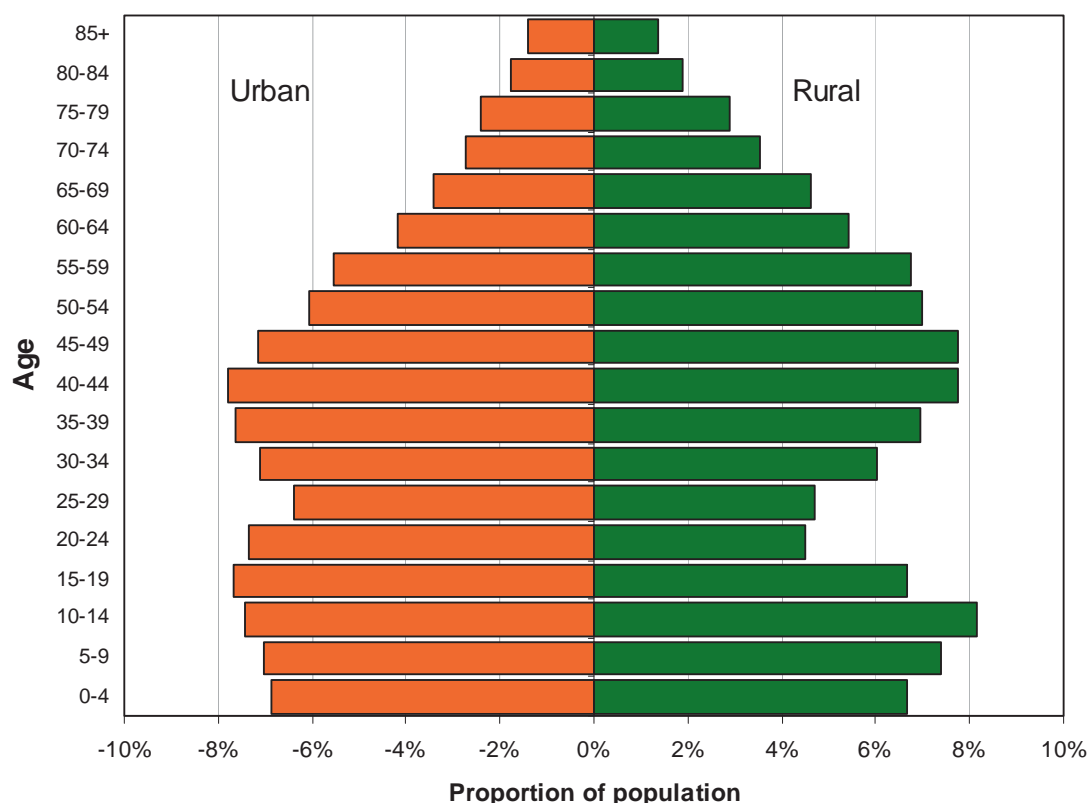
According to Statistics New Zealand, changes in the population's age structure are occurring in all areas, but the most important trend is the general ageing of the population. The 'baby boomers' (those aged 40–59 in 2006) will be aged 65–84 in 2031.¹⁰⁴ This will influence age distribution in every Urban and Rural profile over the coming decades.

¹⁰⁴ Statistics New Zealand. 2009. *Local Population Trends*. www.stats.govt.nz/products-and-services/Articles/local-population-trends.htm (accessed 30 June 2009).

Even now, the median age in farming communities is higher than it is in urban centres – often in the 40s and early 50s, compared with the national median of 35.9 years in 2006. This is in part because rural communities lose young adults (18–29 years) to urban centres for educational, employment and social reasons.¹⁰⁵

Figure 3 illustrates the differences in age distribution between urban and rural areas.

Figure 3: Age distributions in urban and rural areas, 2006



Notes

Urban = Main Urban Areas, Satellite Urban Areas, Rural Areas with High Urban Influence.
 Rural = Highly Rural/Remote Areas, Rural Areas with Low Urban Influence, Rural Areas with Moderate Urban Influence, and Independent Urban Areas.

Source: Statistics New Zealand. 2008. Data tables: People (People.xls). *New Zealand: An urban/rural profile Update*.
www.statistics.govt.nz/publications/businessperformanceenergyandagriculture/urban-rural-profile-update.aspx.

People aged 45–79 make up a larger proportion of the rural population structure than the urban population structure.¹⁰⁶

¹⁰⁵ Ministry of Agriculture and Forestry. 2008. The demographic trends and issues affecting the rural population. Presentation by Gavin Forrest and Parnell Trost. Wellington: Ministry of Agriculture and Forestry; Statistics New Zealand. 2008. *Population Mobility of Urban/Rural Profile Areas*.
www.stats.govt.nz/publications/populationstatistics/internal-migration/mobility-urban-rural-areas.aspx.

¹⁰⁶ Intra-rural differences cannot be seen in the graph.

Ethnicity and age distribution

European/Pākehā and Māori comprise 71 percent and 18 percent of the rural population respectively.

The Pacific population and those who identified as Asian in the 2006 Census of Population and Dwellings are roughly equally represented at 1–2 percent of the population in each of the rural profiles. The balance is in a category known as ‘other,’ which is mainly people who chose ‘New Zealander’ in the census.

Eighteen percent of Highly Rural/Remote Areas’ residents are Māori compared with only 12.6 percent of the population in Main Urban Areas. Proportions of Māori are highest (20 percent) in Independent Urban Areas.

The age distribution of the Māori population nationwide in rural (and urban) areas is very different from the non-Māori population in two main ways.

First, the Māori population has a far smaller proportion of elderly people than the non-Māori population. This is a reflection of the persistent disparity in health status among ethnic groups in New Zealand. Though mortality has fallen considerably over the last two decades, Māori male and female life expectancy at birth (70.4 and 75 years respectively) is still significantly lower than male and female non-Māori life expectancy (79 and 83 years respectively).¹⁰⁷

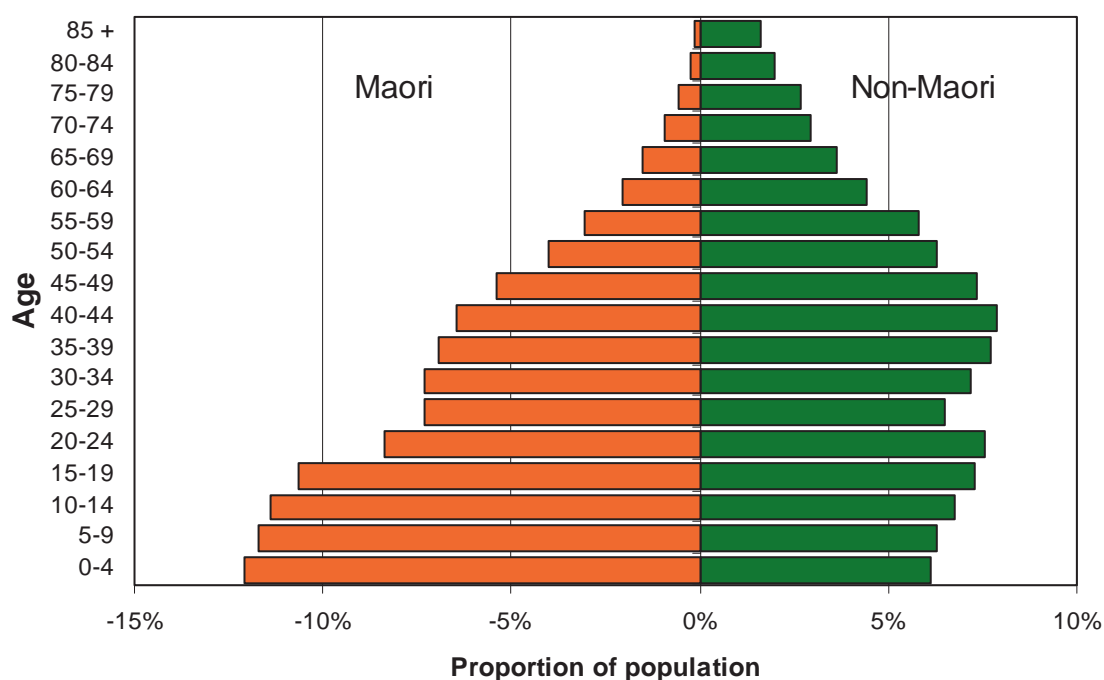
Second, there is a large proportion of children in Māori communities. Despite the fact this proportion was far higher throughout most of the 20th century,¹⁰⁸ it remains a relatively large proportion and has significant implications for service delivery for Māori wherever they reside.

Figures 4 and 5 illustrate the differences described above between the age distribution of Māori and non-Māori populations in Urban areas and Rural Areas with Low Urban Influence.

¹⁰⁷ Statistics New Zealand. 2009. *Life Tables 2005–2007*. Produced for the National Health Committee.

¹⁰⁸ Pool I, Pole N. 1987. *The Māori Population to 2011: Demographic change and its implications*. Technical paper. Wellington: New Zealand Demographic Society.

Figure 4: Māori and non-Māori age distribution, main urban areas, 2006

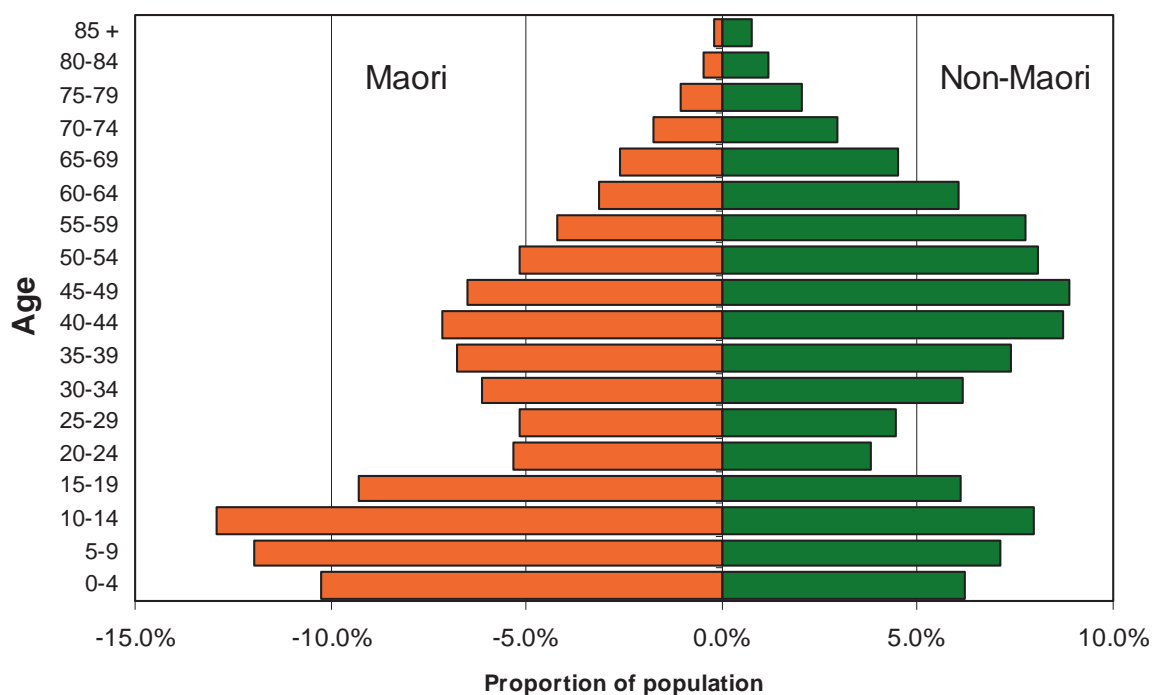


Note

Urban = Main Urban, Satellite Urban, Rural with high urban influence areas.

Source: Statistics New Zealand, 2009. Census 2006 by Urban/Rural Profile. Job ID: EWJ25113.

Figure 5: Māori and non-Māori age distribution, rural areas with low urban influence, 2006



Source: Statistics New Zealand, 2009. Census 2006 by Rural-Urban Profile. Job ID: EWJ25113.

Both Māori and non-Māori young adults (20–29 years) are drawn from rural to urban living. A larger proportion of Māori aged 45 and over (25 percent) is in Rural Areas with Low Urban Influence (and Highly Rural/Remote Areas) than in Urban areas (18 percent). The proportion of non-Māori aged 45 and over in Highly Rural/Remote Areas and Rural Areas with Low Urban Influence is larger still (42 percent compared with 37 percent in Urban areas).

Deprivation and other factors¹⁰⁹

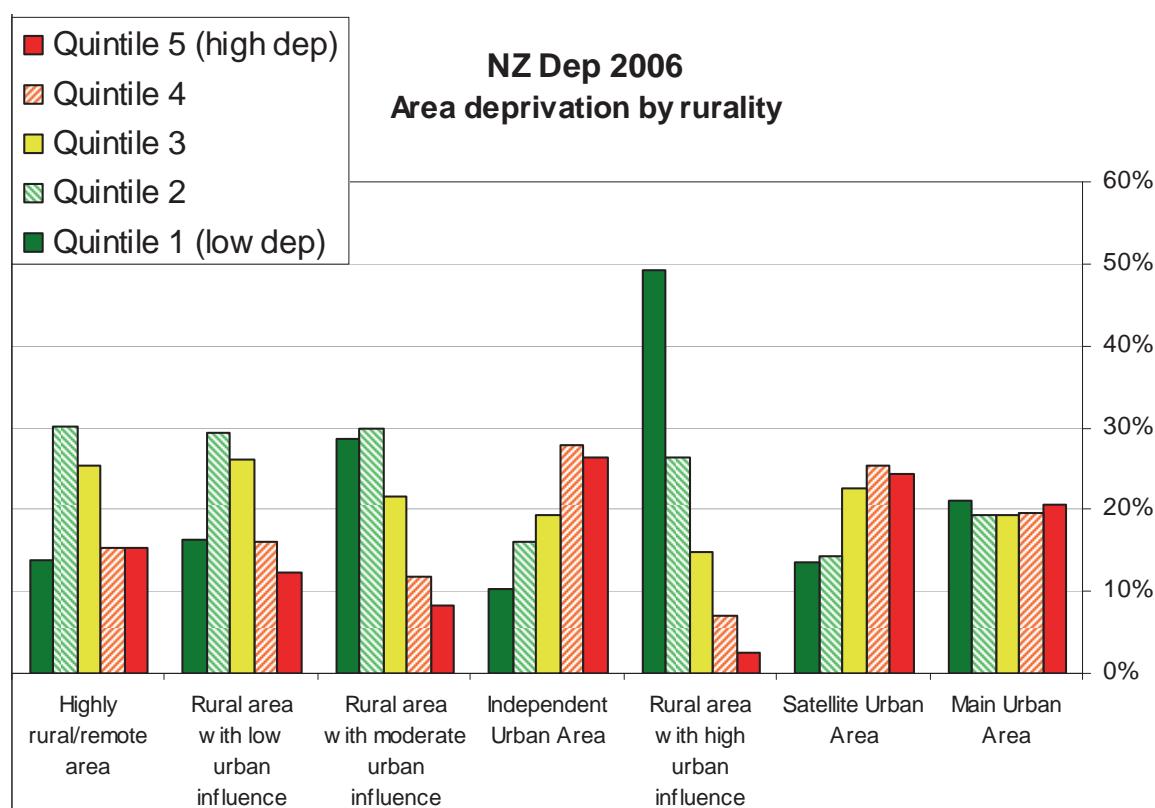
Beyond Main Urban Areas, there is large variation in deprivation by rurality. More deprivation (among any profile) is found among Independent Urban Areas. The lowest levels of deprivation are found in Rural Areas with High Urban Influence. Rural Areas with Moderate Urban Influence (8 percent) and Low Urban Influence (12 percent) and Highly Rural/Remote Areas (15 percent) have smaller proportions of quintile five (high deprivation) residents than do Main Urban Areas (21 percent), Satellite Urban Areas (25 percent), and Independent Urban Areas (27 percent). (See Figure 6.)

Areas of New Zealand with the highest deprivation by Urban/Rural Profile tend to also have higher proportions of Māori and children.¹¹⁰

¹⁰⁹ For explanations and maps using the NZDep06 index of deprivation, see White P, Gunston J, Salmond C, et al. 2008. *Atlas of Socioeconomic Deprivation in New Zealand NZDep2006*. Wellington: Ministry of Health. [www.moh.govt.nz/moh.nsf/pagesmh/8066/\\$File/NZDep2006_text.pdf](http://www.moh.govt.nz/moh.nsf/pagesmh/8066/$File/NZDep2006_text.pdf); Salmond C, Crampton P, Atkinson J. 2007. *NZDep2006 Index of Deprivation User's Manual*. Wellington: Ministry of Health. [www.moh.govt.nz/moh.nsf/pagesmh/4623/\\$File/nzdep2006-users-manual.pdf](http://www.moh.govt.nz/moh.nsf/pagesmh/4623/$File/nzdep2006-users-manual.pdf).

¹¹⁰ Statistics New Zealand. 2004. *New Zealand: An Urban/Rural Profile* (report). Wellington: Statistics New Zealand. www.stats.govt.nz/Publications/BusinessPerformanceEnergyAndAgriculture/urban-rural-profile.aspx.

Figure 6: Area deprivation by rurality (2006 New Zealand Index of Deprivation)



Source: Statistics New Zealand 2009. Census 2006 by Urban/Rural Profile. Job ID: EWJ24689.

Education

Educational attainment is lowest overall in Highly Rural/Remote Areas and Rural Areas with Low Urban Influence, Independent Urban Areas and Satellite Urban Areas, and highest overall in Main Urban Areas and Highly Rural/Remote Areas.¹¹¹ Thirty percent of rural New Zealanders have no educational qualifications compared with 20 percent of urban New Zealanders.¹¹² In a 2006 examination of the Urban/Rural Profile against New Zealand Index of Deprivation areas, smaller proportions of working age people, lower labour force participation rates, and smaller than average proportions of professionals were found in more deprived Urban/Rural Profile areas.¹¹³

Deprivation and ethnicity

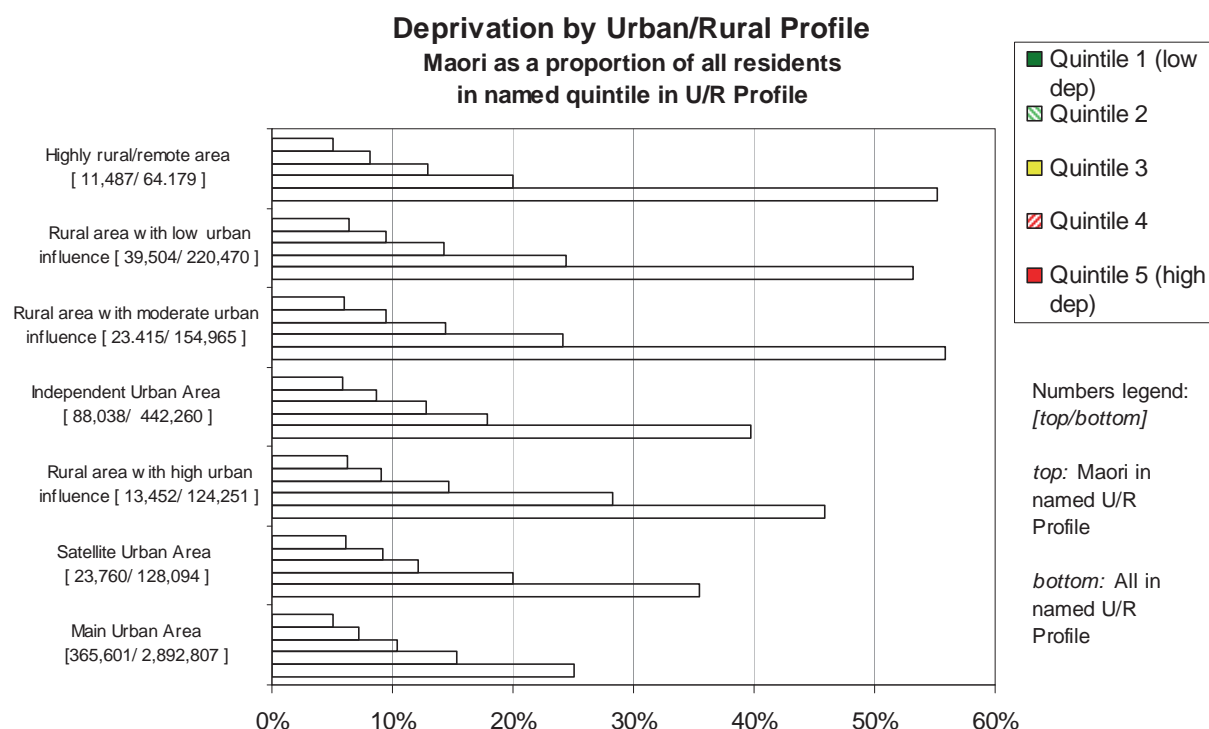
Figure 7 shows Māori as a proportion of people living in each quintile in each Urban/Rural Profile.

¹¹¹ Note that jobs in rural areas are less likely to require an educational qualification.

¹¹² Statistics New Zealand. 2009. *Census 2006 by Urban/Rural Profile*. Job ID: EWJ24689.

¹¹³ Goodyear R. 2006. *Life in a rural paradise? Spatial inequalities within New Zealand: An urban and rural perspective*. Presented to SCORUS Conference on Regional and Urban Statistics and Research, September 2006, Wroclaw, Poland.

Figure 7: Deprivation by Urban/Rural Profile: Māori as a proportion of all residents in named quintile in Urban/Rural Profile



Source: Statistics New Zealand. 2009. Census 2006 by Urban/Rural Profile. Job ID: EWJ26503.

Māori make up a larger proportion of those in high deprivation areas than non-Māori in rural areas (though absolute numbers are highest in urban areas). Of those living in quintile five deprivation in Highly Rural/Remote Areas, Rural Areas with Low Urban Influence, and Moderate Urban influence areas, over half are Māori. Almost half (46 percent) of quintile five residents in Highly Rural/Remote Areas are Māori (1,476) and 40 percent of those in quintile five in Independent Urban Areas are Māori. There is no difference by Urban/Rural Profile of the proportions of Māori living in New Zealand Index of Deprivation quintiles 1, 2 or 3.

Socioeconomic deprivation and Māori ethnicity are each strongly correlated with a range of poor health outcomes. It is also common for deprivation and ethnicity to have an additive effect on morbidity and mortality.¹¹⁴ Populations matching this description exist in pockets, primarily but not exclusively in the North Island, and are often found in Remote areas. Some examples are found in the four DHB districts visited (Northland, West Coast, Tairāwhiti and Waikato). This is a demographic to whom rural health (and other) services should be targeted.

¹¹⁴ See, for example, Blakely T, Tobias M, Atkinson J, et al. 2007. *Tracking Disparity: Trends in ethnic and socioeconomic inequalities in mortality, 1981–2004*. Wellington: Ministry of Health; Robson B, Harris R (eds). *Hauora: Māori Standards of Health IV. A study of the years 2000–2005*. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare; National Health Committee 2007. Facts on chronic conditions as a major driver of health inequalities. In *Meeting the Needs of People with Chronic Conditions*. Wellington: National Health Committee. Appendix 2.

Disability

The most recent New Zealand information on the number of people with disabilities in rural areas is from the 2001 disability surveys.¹¹⁵ Although the age-standardised rates of disability were similar for people living in rural and urban households¹¹⁶ (17,900 and 16,600 per 100,000, respectively), in the group aged 75 and over urban women had a markedly higher rate of disability than rural women. This is thought to reflect, at least in part, the requirement and/or preference for elderly people with a disability and perhaps complex health needs to migrate closer to urban centres and the services they need.

Similar proportions of Māori and non-Māori with a disability lived in rural areas (15 percent and 13 percent respectively).

Rural adults with a disability were more likely (at 76 percent) than urban adults with a disability (64 percent) to live in a family home (rather than a residential facility). They were also more likely (at 66 percent) to have a partner than adults with a disability living in urban areas (52 percent).

Personal income

Nationwide, the median personal income for people aged 15 and over is \$24,400. People in the 'Other' ethnic category (mainly people who chose 'New Zealander' in the Census of Population and Dwellings) earn the highest income of all groups. Median personal incomes by census ethnic group are: 'Other', \$31,200; European, \$25,400; Māori, \$20,900; Pacific peoples, \$20,500; Middle Eastern, Latin American and African, \$16,100; and Asian 14,500.¹¹⁷

Median incomes are consistently higher, among people aged 25 and over, in Main Urban and Rural Areas with High Urban Influence. Residents in Highly Rural/Remote Areas have the lowest median personal incomes when aged 25–60 years. Independent Urban Areas also show consistently low median incomes, relative to other Urban/Rural Profile areas, among people aged 25 and over.¹¹⁸ Income among Māori is lower in every Urban/Rural Profile than that of 'Other' and Europeans but the differences are largest in Highly Rural/Remote Areas, where Māori personal median income is \$16,400.

¹¹⁵ Ministry of Health. 2004. *Living with Disability in New Zealand: A descriptive analysis of results from the 2001 Household Disability Survey and the 2001 Disability Survey of Residential Facilities*. Wellington: Ministry of Health.

¹¹⁶ The terms urban and rural were defined according to Statistics New Zealand's Urban/Rural Classification: Main Urban Area (30,000 and over), Secondary Urban Area (10,000–29,999), Minor Urban Area (1,000–9,999), Rural Centre (300–999) and True Rural Area (less than 300). This population density-based standard predates the Urban/Rural Profile.

¹¹⁷ Statistics New Zealand. 2009. *Census 2006 by Urban/Rural Profile*. Job ID: EWJ25113.

¹¹⁸ Statistics New Zealand. 2008. Data tables: Economic standard of living (Economic-Standard-of-Living.xls). *New Zealand: An Urban/Rural Profile Update*. www.statistics.govt.nz/publications/businessperformanceenergyandagriculture/urban-rural-profile-update.aspx.

Access to transport

Eight percent of Urban¹¹⁹ households and 6.2 percent of Rural¹²⁰ households lack a motor vehicle. Of households in Highly Rural/Remote Areas 4.4 percent had no access to a vehicle in 2006 and 34.3 percent of households in Highly Rural/Remote Areas had access to only one vehicle. Of households in Independent Urban Areas, 9.1 percent had no vehicle and 41 percent had only one. By contrast, in Rural with High Urban Influence Areas, 1.7 percent lacked a vehicle and 22.7 percent had access to only one.¹²¹

According to the 2001 disability surveys, Rural¹²² adults with a disability were more likely to be drivers (82 percent) than their urban counterparts (68 percent). More than half (54 percent) of the adults with a disability in rural areas could not get to a bus stop or railway station easily, compared with 19 percent of adults with a disability in urban areas. Also, rural adults with a disability were slightly more likely than urban adults with a disability to report difficulties using public transport.¹²³

Telecommunications

Like homes all across New Zealand, rural households have steadily increased their tele-connectivity. In 2006, 47.9 percent of households in Independent Urban Areas, 51.4 percent of households in Highly Rural/Remote Areas, and 55.3 percent of households in Rural Areas with Low Urban Influence reported having access to the internet (compared with 60 percent of households in Main Urban Areas).

Nationwide, proportions of households without any form of telecommunications fell from 5 percent to 2 percent in the decade to 2006. In Rural Areas with Low Urban Influence that figure was 2.9 percent and in Highly Rural/Remote Areas it was 4.1 percent – 3,138 households between both areas.¹²⁴ As remoteness increases, so too do the potential negative health consequences due to a lack of telecommunication or transport.

¹¹⁹ 'Urban' means Main Urban Areas, Satellite Urban Areas, and Rural Areas with High Urban Influence.

¹²⁰ 'Rural' means Rural Areas with High, Moderate and Low Urban Influence, Highly Rural/Remote Areas, and Independent Urban Areas.

¹²¹ Statistics New Zealand. 2008. Data tables: Social conditions (Social-Conditions.xls). *New Zealand: An Urban/Rural Profile Update*. www.statistics.govt.nz/publications/businessperformanceenergyandagriculture/urban-rural-profile-update.aspx.

¹²² Defined according to the Statistics New Zealand Urban/Rural Classification.

¹²³ Ministry of Health. 2004. *Living with Disability in New Zealand: A descriptive analysis of results from the 2001 Household Disability Survey and the 2001 Disability Survey of Residential Facilities*. Wellington: Ministry of Health.

¹²⁴ Statistics New Zealand. 2008. Data tables: Social conditions (Social-Conditions.xls). *New Zealand: An Urban/Rural Profile Update*. www.statistics.govt.nz/publications/businessperformanceenergyandagriculture/urban-rural-profile-update.aspx.

Appendix 3: Life expectancy and health status

Main findings

Life expectancy in New Zealand is similar for rural and urban populations.

The gap between Māori and non-Māori life expectancy is present in rural and urban areas.

Rural Māori have a shorter life expectancy than urban Māori, with 1.2 years difference for women and 1.5 years difference for men.

New Zealand research suggests health status is similar in rural and urban areas. The literature highlights a few areas of concern, including higher unintentional injury rates for rural residents.

Deprivation accentuates the impacts of rurality, and together they can result in poorer health outcomes.

In rural areas compared with urban areas a larger proportion of Māori are in New Zealand Index of Deprivation quintile five (high deprivation) areas.

Life expectancy

International comparison

An international comparison of rural and urban population health status reveals a mixed picture.

In Australia, remote rural people have a life expectancy four years less than urban people have. However, the difference is only marginal between the broader rural and urban populations.¹²⁵ The reduced life expectancy of indigenous Australians (which is about 17 years less than for all Australians) and the larger proportion of indigenous Australians living in remote areas, are the greatest contributors to this difference. This helps to explain the trend of lower life expectancy with increasing remoteness in Australia.¹²⁶

¹²⁵ Australian Institute of Health and Welfare. 1998. *Health in Rural and Remote Australia*. AIHW Cat PHE 6. Canberra: Australian Institute of Health and Welfare. www.aihw.gov.au/publications/phe/hrra/hrra-c00.pdf.

¹²⁶ Australian Institute of Health and Welfare. 2008. *Rural, Regional and Remote Health: Indicators of health status and determinants of health*. Rural Health Series 9. Cat PHE 97. Canberra: Australian Institute of Health and Welfare. www.aihw.gov.au/publications/index.cfm/title/10519.

In Canada, life expectancy decreases with increasing rurality.¹²⁷

In Scotland, the life expectancy of men in 'remote rural' and 'accessible rural' areas is higher than in 'large urban' areas; similarly, women in 'remote rural' areas have the highest life expectancy.¹²⁸

International studies

In many developed countries, higher rates in rural areas than in urban areas have been reported for specific:

- health concerns, such as suicide and injury from motor vehicle accidents
- medical conditions, such as melanoma, cervical and prostate cancers, cardiovascular disease, and obesity.¹²⁹

Other studies show a range of conditions that have higher rates among urban populations including breast, stomach and liver cancers, and respiratory conditions.¹³⁰

New Zealand comparisons

New Zealand data shows life expectancy is similar for rural and urban populations as a whole (see Table 3).¹³¹

Table 3: Life expectancy at birth and age 65 for urban and rural populations by sex, 2005–2007

	Life expectancy (in years) (total population)					
	Urban		Rural		Urban–rural difference	
	Male	Female	Male	Female	Male	Female
At birth	78.4	82.4	77.6	82.4	0.8	0
At 65 years	18.2	20.8	18.4	21.2	-0.2	-0.4

¹²⁷ Canadian Institute for Health Information. 2006. *How Healthy Are Rural Canadians? An assessment of their health status and health determinants: Summary report*. Ottawa: Canadian Institute for Health Information. www.phac-aspc.gc.ca/publicat/rural06.

¹²⁸ Scottish Executive. 2004. *Scottish Executive Urban Rural Classification 2003–2004*. Edinburgh: Scottish Executive.

¹²⁹ Smith K, Humphreys J, Wilson M. 2008. Addressing the health disadvantage of rural populations: How does epidemiological evidence inform rural health policies and research? *Australian Journal of Rural Health* 16: 56–66. p 57.

¹³⁰ Smith K, Humphreys J, Wilson M. 2008. Addressing the health disadvantage of rural populations: How does epidemiological evidence inform rural health policies and research? *Australian Journal of Rural Health* 16: 56–66. p 57.

¹³¹ Data produced by Statistics New Zealand for the National Health Committee.

However, rural Māori have a shorter life expectancy than urban Māori. Rural Māori life expectancy for men is 1.5 years less at birth than for urban Māori men, with the corresponding figure being 1.2 years for rural Māori women.¹³² (See Table 4.)

Table 4: Life expectancy at birth and age 65 for urban and rural Māori by sex, 2005–2007

	Life expectancy (in years) (Māori)					
	Urban		Rural		Urban–rural difference	
	Male	Female	Male	Female	Male	Female
At birth	71.2	75.8	69.7	74.6	1.5	1.2
At 65 years	14.8	17.1	13.8	16.0	1.0	1.1

Health status

New Zealand information

The Ministry of Health and Accident Compensation Corporation provided the raw data for the following analyses that the National Health Committee (NHC) carried out. All data has been age standardised¹³³ and the definition of ‘Rural’ is based on census area units¹³⁴ within the categories of:

- Highly Rural/Remote Area
- Rural Area with Low Urban Influence
- Independent Urban Area
- Rural Area with Moderate Urban Influence.

Analysis of nationally held databases

The results of analysis of nationally held databases¹³⁵ at the Ministry of Health and Accident Compensation Corporation are shown in Table 5.

¹³² Data produced by Statistics New Zealand for the National Health Committee.

¹³³ The age standardisation is based on the ratio of the total population in each age group.

¹³⁴ New Zealand is split into around 1100 census area units.

¹³⁵ National Minimum Dataset, National Non-Admitted Patient Collection, Pharmhouse, PHO enrollee database, Lab testing claims warehouse, Mental Health Information National Collection, and National Health Index.

Table 5: Age-standardised health services and outcomes

Age standardised health outcomes	Urban	Rural	Percentage difference (%)
Outpatient	0.082	0.091	11
Emergency department	0.040	0.048	20
Community dispensing	0.505	0.497	-1
GP consult	0.563	0.557	-1
Laboratory test	0.242	0.205	-15
Mood/anxiety disorder	0.112	0.109	-2
Chronic disease	0.339	0.323	-5
Accidents	0.415	0.439	6

Notes

Outpatient = one or more outpatient events in quarter.

Emergency department = one or more emergency department events in quarter.

Community dispensing = one or more community pharmacy dispensings in quarter.

GP consult = one or more general practitioner consultations in quarter; Laboratory test = one or more laboratory tests in quarter.

Mood/anxiety disorder = treatment or diagnosis for mood or anxiety disorder in 1 July 2007–30 June 2008 (prevalence).

Chronic disease = treatment or diagnosis for coronary heart disease, diabetes, asthma or chronic obstructive pulmonary disease at end of 12 months of study (prevalence).

Accidents = accident rates are based on accident-related claims to the Accident Compensation Corporation in the 2007/08 financial year (sourced from the Accident Compensation Corporation).

Rural residents compared with urban residents are more likely to have had an outpatient visit in the past 12 months, have had an emergency department attendance or made an accident compensation claim. Rural residents are less likely to have a laboratory test and less likely to have a chronic disease.

While statistically significant, there was only a small difference in general practitioner consultation (GP consult) rates, community pharmaceutical dispensing, and mood/anxiety disorders. These differences could vary between time periods, so it is difficult to generalise from the data in Table 5.

Analysis of the New Zealand Health Survey

The results from the analysis of the New Zealand Health Survey (by Urban/Rural Profile) is shown in Table 6.

Table 6: Age-standardised health services and outcomes by urban and rural areas

Age standardised health outcomes	Urban	Rural	Percentage difference (%)
001 Prevalence of ischemic heart disease (IHD)	3.50	5.81	66
002 Stroke prevalence	1.24	2.12	71
004 Asthma prevalence	19.26	16.94	-12
007 Disorder of the neck or back prevalence	20.79	27.81	34
010 Public hospital use (excluding ED) in the past 12 months	16.81	20.21	20

Notes

- 001 Prevalence of ischemic heart disease (IHD) = established by asking adult participants if they have ever been diagnosed by a doctor with a heart attack that resulted in hospitalisation, and/or angina.
- 002 Stroke prevalence = established by asking all adult participants if they had ever been told by a doctor that they had had a stroke. Mini-strokes (transient ischaemic attacks) were excluded.
- 004 Asthma prevalence = established by asking the parents of child participants if their child has ever been diagnosed by a doctor with asthma, and if they were currently using any treatment for this condition. The parents of all children aged 5–14 years were also asked if their child had wheezing or whistling in the chest in the previous 12 months, how many times this occurred, how often their child's sleep had been disturbed due to wheezing, and if the wheezing had ever been severe enough to limit the child's speech to only one or two words at a time between breaths, in the previous 12 months. Adult participants were asked if a doctor had ever told them they had asthma. If so, they were asked if they had had an asthma attack in the previous 12 months, and what treatment they were currently taking for asthma.
- 007 Disorder of the neck or back prevalence = established through asking adult participants if they experience chronic pain; that is, pain that has lasted, or is expected to last, six months or more. If so, they were asked questions about the location, cause and treatment of their chronic pain, in this case it is neck or back pain.
- 010 Public hospital use (excluding emergency department (ED)) in the past 12 months = established by asking adults participants and the parents of child participants whether they/their child had used a service at, or been admitted to, a public hospital in the previous 12 months. If they had used a public hospital service, they were asked the type of service(s): emergency department, outpatient, day treatment or inpatient.

This analysis is from a survey with a small sample size, so the differences between urban and rural areas need to be higher than in Table 5 before we can state there is a statistical significant difference. Notable factors are that rural people are more likely to have ischemic heart disease, a stroke, and a disorder of the neck or back, and more likely to have used a public hospital in the past 12 months. Rural people are also less likely to have been diagnosed with asthma.

The NHC also looked at factors such as non-avoidable hospitalisations, avoidable hospitalisations, mental health attendance, and diabetes prevalence but did not find statistical significant differences between urban and rural areas.

New Zealand literature on rural health

Better health status for rural people

Rural populations appear to have lower rates of breast, stomach and liver cancers and respiratory conditions.¹³⁶

The New Zealand Mental Health Survey found that people living in secondary centres and rural areas had a lower prevalence of any mental disorder than those in main urban or minor urban centres ($p = .008$ overall).¹³⁷ Pearce et al (2007) studied trends in suicide rates in rural and urban areas between 1981 and 2001. For much of the period, male and female suicide rates were lower in rural areas than in urban areas. However, from the mid-1990s suicide rates appear to have increased in rural areas to the point where they now approximate the rates seen in urban areas for both men and women (see Figure 8).^{138, 139} The apparent year-to-year fluctuations in the rural rates most likely reflect the much smaller numbers of suicides and people in rural areas. However, Min (2008) found men in highly remote areas have a higher suicide risk than men in main urban areas.¹⁴⁰

¹³⁶ Smith K, Humphreys J, Wilson M. 2008. Addressing the health disadvantage of rural populations: How does epidemiological evidence inform rural health policies and research? *Australian Journal of Rural Health* 16: 56–66. p 57.

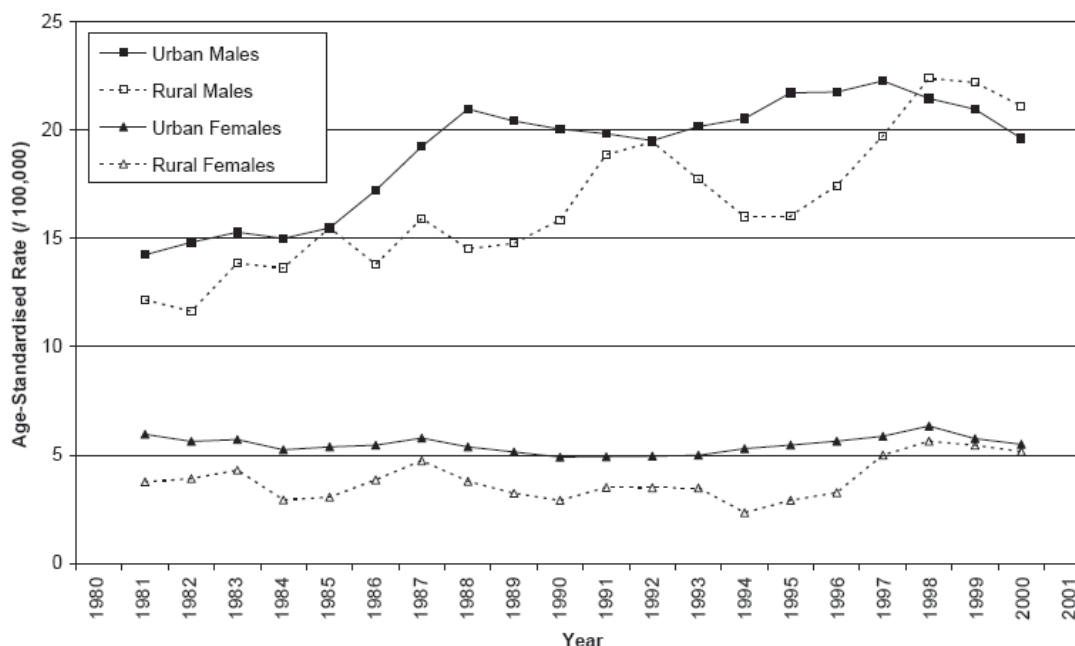
¹³⁷ Oakley Browne MA, Wells JE, and Scott KM (eds). 2006. *Te Rau Hinengaro: The New Zealand Mental Health Survey*. Wellington: Ministry of Health. [www.moh.govt.nz/moh.nsf/pagesmh/5223/\\$File/mental-health-survey.pdf](http://www.moh.govt.nz/moh.nsf/pagesmh/5223/$File/mental-health-survey.pdf).

¹³⁸ Pearce J, Barnett R, Jones I. 2007. Have urban/rural inequalities in suicide in New Zealand grown during the period 1980–2001? *Social Science and Medicine* 65: 1807–1819.

¹³⁹ The study uses the Statistics New Zealand Urban/Rural Profile when classifying rural and urban areas. In the study, the three 'urban' and four 'rural' categories are combined. This differs from our use of the Urban/Rural Profile – we have included Independent Urban Areas in the rural setting.

¹⁴⁰ Min S. 2008. *Suicide trends in New Zealand 1993–2003: Are there differences between rural and urban incidence rates?* PhD thesis, University of Auckland.

Figure 8: Three-year moving average age-standardised rates of suicide for males and females by binary urban/rural status, 1981–2001



Source: Pearce J, Barnett R, Jones I. 2007. *Have urban/rural inequalities in suicide in New Zealand grown during the period 1980 – 2001?* *Social Science and Medicine* 65 (2007) 1807–1819.

Figure 8 shows lower suicide rates for rural males and females than urban males and females. However, since the mid-1990s the gap appears to have closed.

There have been numerous studies on the rate of asthma allergies and eczema and the impact of exposure to farming on the rates of these conditions. Research findings have been mixed, although continued exposure to farming appears to have some protective effect.¹⁴¹ Research by Lewis et al (1997) found the prevalence of asthma symptoms in New Zealand

¹⁴¹ Literature:

- Douwes J, Travier N, Huang K, Cheng S, McKenzie J, Le Gros G, von Mutius E, Pearce N. 2007. Lifelong farm exposure may strongly reduce the risk of asthma in adults. *Allergy* 62: 1158–1165.
- Douwes J, Cheng S, Travier N, Cohet C, Niesink A, McKenzie J, Cunningham C, Le Gros G, von Mutius E, Pearce N. 2008. Farm exposure in utero may protect against asthma, hay fever and eczema. *Eur Respir J* 32: 603–611.
- Douwes J, Brooks C, Pearce N. 2009. Protective effects of farming on allergies and asthma: have we learnt anything since 1873? Editorial: *Expert Review Clinical Immunology* 5(3): 213–219.
- Eduard W, Douwes J, Omenaas E, Heederik D. 2004. *Do farming exposures cause or prevent asthma?* Results from a study of adult Norwegian farmers. *Thorax* 59: 381–386, doi: 10.1136/thx.2004.013326.
- Koskela HO, Happonen KK, Remes ST, Pekkanen J. 2005. Effect of farming environment on sensitisation to allergens continues after childhood. *Occup Environ Med* 62: 607–611.
- Portengen L, Sigsgaard T, Omland O, Hjort C, Heederik D, Doekes G. 2002. Low prevalence of atopy in young Danish farmers and farming students born and raised on a farm. *Clin Exp Allergy* 32: 247–253.
- Radon K, Schulze A, Nowak D. 2006. Inverse association between farm animal contact and respiratory allergies in adulthood: protection, underreporting or selection? *Allergy* 61: 443–446.
- Schultze A, van Strien R, Praml G, Nowak D, Radon K. 2007. Characterisation of asthma among adults with and without childhood farm contact. *Eur Resp J* 29: 1169–1173.
- Wickens K, Lane J, Fitzharris P, Siebers R, Riley G, Douwels J, Smith T, Crane J. 2002. Farm residence and exposures and the risk of allergic disease in New Zealand Children. *Allergy* 57: 1171–1179.

was generally higher in urban areas than rural areas but with large geographic variation.¹⁴² One study found non-Māori asthma hospitalisation rates to be marginally lower in rural areas than in urban areas.¹⁴³

Worse health status for rural people

Some countries report higher rural rates for suicide and injury from motor vehicle accidents, melanoma, cervical and prostate cancers, cardiovascular disease and obesity.¹⁴⁴ There is a lack of evidence in New Zealand on the rates of these conditions in rural populations.

There is some evidence injury rates are higher in rural New Zealand compared with urban areas,^{145,146} in part related to the assumed higher prevalence of hazardous occupations.¹⁴⁷

Clarke and Jensen (1997) found young adults living in towns and rural districts have significantly higher mean depression scores (24.22 and 35.59) than young adults living in cities (21.83).¹⁴⁸ For Māori, the evidence is mixed, with one study showing those living in towns having significantly higher mean depression scores (30.84) than Māori living in rural districts or cities (23.72 and 23.97 respectively).^{149,150}

Between 1997 and 2006, cryptosporidiosis notification rates were 2.8 times higher in rural areas than in urban areas; rates were also correlated with farm and animal density.¹⁵¹ Farm animals are known vectors of the infection, and there is an association between poor water quality and human cryptosporidiosis.¹⁵²

¹⁴² Lewis S, Hales S, Slater T, et al. 1997. Geographical variation in the prevalence of asthma symptoms in New Zealand. *New Zealand Medical Journal* 110: 286–289.

¹⁴³ Ellison-Loschmann L, King R, Pearce N. 2004. Regional variations in asthma hospitalisations among Maori and non-Maori. *New Zealand Medical Journal* 117(1188). www.nzma.org.nz/journal/117-1188/745.

¹⁴⁴ Smith K, Humphreys J, Wilson M. 2008. Addressing the health disadvantage of rural populations: How does epidemiological evidence inform rural health policies and research? *Australian Journal of Rural Health* 16: 56–66. p 57.

¹⁴⁵ Hider P, Lay-Yee R, Davis P. 2007. Doctors, practices, patients, and their problems during usual hours: A description of rural and non-rural primary care in New Zealand in 2001–2002. *New Zealand Medical Journal* 120(1253). www.nzma.org.nz/journal/120-1253/2519.

¹⁴⁶ Results are significant to the 5 percent level.

¹⁴⁷ Pool I, Baxendine S, Katzenellenbogen J, et al. 2006. *New Zealand Regions, 1986–2001: Hospitalisation and some related health facts*. Population Studies Centre Discussion Paper Number 63. Hamilton: University of Waikato.

¹⁴⁸ P values < 0.01; that is, the results are significant to the 1 percent significance level.

¹⁴⁹ Clarke D, Jensen M. 1997. The effects of social support, life events, and demographic factors on depression among Maori and Europeans in New Zealand rural, town and urban environments. *Journal of Community Psychology* 25(4): 303–323.

¹⁵⁰ P values < 0.05; that is, the results are significant to the 5 percent significance level.

¹⁵¹ Snel S, Baker M, Venugopal K. 2007. The epidemiology of cryptosporidiosis in New Zealand. *New Zealand Medical Journal* 122(1290). www.nzma.org.nz/journal/122-1290/3479.

¹⁵² Duncanson M, Russell N, Weinstein P, et al. 2000. Rates of notified cryptosporidiosis and quality of drinking water supplies in Aotearoa, New Zealand. *Water Research* 34: 3804–3812.

New Zealand Health Survey

The Ministry of Health, in *Urban–Rural Health Comparisons: Key results of the 2002/03 New Zealand Health Survey*,¹⁵³ compares the health of New Zealanders aged 15 and over living in urban and rural areas using data from the 2002/03 New Zealand Health Survey.

As well as comparing the health status of people living in urban (cities and towns with populations of 1,000 or more) and rural areas, the report also looks at health status by deprivation levels, and across Statistics New Zealand's 'old' Urban/Rural Classification. This classification describes five area types by population density: main urban areas (population 30,000 and over), secondary urban areas (population 10,000–29,999), minor urban areas (population 1,000–9,999), rural centres (population 300–999), and true rural areas (population less than 300). Note that these urban–rural categories are different to those in the Statistics New Zealand Urban/Rural Profile used elsewhere in this NHC report. Key findings from the Ministry of Health report are discussed below.

Chronic diseases

Urban dwellers were significantly more likely to have been diagnosed with heart disease than rural dwellers, for both men and women.

There were no significant differences in the prevalence of diabetes between urban and rural dwellers. However, in urban areas the prevalence of diabetes was significantly higher in areas of high socioeconomic deprivation than in areas of low or medium deprivation, for both men and women.

For women aged 45 and under the prevalence of asthma was significantly higher in urban dwellers than in rural dwellers.

For women, the prevalence of diagnosed arthritis and osteoporosis was significantly higher in urban areas than in rural areas. The prevalence of arthritis was particularly high for women in secondary and minor urban areas.

For men, the prevalence of spinal disorders was significantly higher in rural areas than in urban areas. This difference was particularly marked between true rural areas and main urban areas.

¹⁵³ Ministry of Health. 2007. *Urban–Rural Health Comparisons: Key results of the 2002/03 New Zealand Health Survey*. Wellington: Ministry of Health.

Risk and protective factors

Urban women were significantly less likely than rural women to eat the recommended two or more servings of fruit a day. For urban women, the rate of adequate fruit consumption decreased with increasing socioeconomic deprivation.

People who live in main urban areas were significantly less likely than rural people to eat the recommended three or more servings of vegetables a day, for both men and women.

Urban dwellers were significantly less likely than rural dwellers to be physically active, for both men and women.

Urban women were significantly more likely to be underweight than rural women.

Women living in minor urban towns and rural centres were significantly more likely to be current smokers than women living in main urban centres or true rural areas.

In urban areas, but not rural areas, the prevalence of current smoking increased significantly with deprivation, for both men and women.

Both men and women in urban areas were significantly more likely than rural dwellers to have not drunk alcohol in the last year. The rate of alcohol abstention increased with increasing deprivation.

Urban women in the least deprived areas had a significantly lower prevalence of potentially hazardous drinking than urban women in the most deprived areas, but otherwise, the prevalence of potentially hazardous drinking did not differ between areas.

Health service utilisation

Rural women were significantly less likely to have seen a general practitioner (GP) in the last year compared with urban women.

At their last GP visit, urban women were significantly more likely than rural women to have seen a GP for an immunisation or a vaccination. Rural men were significantly more likely than urban men to have seen a GP because of injury or poisoning.

Women in main urban areas were significantly more likely to have had an unmet need for a GP in the last year than women in true rural areas. Unmet need for GP services increased with level of deprivation in urban areas, but not rural areas.

Women and men from true rural areas were significantly more likely to have seen a dentist or dental therapist in the last year compared with people from urban areas.

Women from true rural areas were significantly more likely to have seen an alternative or complementary provider in the last year than women from rural centres or urban areas.

The use of opticians or optometrists decreased with increasing levels of deprivation, and urban women were significantly more likely to have seen an optician or optometrist in the last year than rural women at each deprivation level.

The use of public and private hospitals did not differ significantly between urban and rural areas overall, for both men and women. However, women in rural centres had a significantly higher rate of using public hospitals in the last year compared with all other people.

Women in urban areas were significantly more likely to have received a prescription at their last doctor's visit than women in rural areas.

People in the most deprived urban areas were significantly more likely to have received a prescription at their last doctor's visit than those in the least deprived urban areas, but the same trend did not occur in rural areas.

Among women, rural dwellers were significantly more likely to have had no prescription items in the last year than urban dwellers.

Appendix 4: The future of rural health

This appendix provides background information about population projections, current policies affecting rural communities and funding information.

Factors affecting the future of rural communities

A net 2 percent increase is expected in the population of Highly Rural/Remote Areas, Rural Areas with Low Urban Influence and Independent Urban Areas Profile areas combined from 2006 to 2026. A steady increase in numbers in urban areas during the same period will cause the rural population to shrink as a proportion of the total population.

The next two decades will bring growing numbers of older people in both rural and urban communities. Independent Urban Areas are projected to be home to an even larger proportion of older people 70 and over (21 percent) than Highly Rural/Remote Areas and Rural Areas with Low Urban Influence (15 percent). Much will depend on the availability and accessibility of residential and home-based care in rural communities.

Age-related projections differ dramatically by ethnicity. The Pākehā population is facing a much greater increase in proportions of older people than are the Māori and Pacific populations. The latter populations will continue to have larger proportions of children.

New Zealand is experiencing the unpredictable effects of a worldwide economic recession. This has affected, among other things, the country's gross domestic product, levels of unemployment, attractiveness to international investment, overseas and domestic share markets, and currency value.

Climate change has, in the past few years, struck the world more dramatically than most had forecast. Unpredictable weather events have implications for rural people's access to services especially in an emergency.

Any rapid change in agricultural fortunes will have an impact on the fortunes of the country as a whole, but first and foremost on the residents of rural New Zealand.

Health policy for rural health services

The following policies are specific to rural services or have specific relevance for rural populations.

New Zealand Health Strategy

Objective 59 of the New Zealand Health Strategy is to 'ensure access to appropriate services for people living in rural areas'.¹⁵⁴ This is described as a service delivery area 'on which the Government wishes the health sector to concentrate in the short to medium term'.¹⁵⁵ The strategy notes variability in quality and access to services in rural areas. The strategy requires improving access to public health protection services in rural areas, with a focus on clean water, sewage and housing.

The strategy states that improvements in rural health will be achieved by policies and programmes for:

- ongoing clinical education and training for rural health care practitioners
- a bonus for providers in rural areas
- funding locum support
- the ongoing promotion of community-based initiatives in rural areas through innovative methods of co-ordinated service delivery involving primary and secondary health care providers
- expanding the skills and roles of service providers such as nurse practitioners and Māori health care providers to undertake a wider range of tasks in association with general practitioners (GPs)
- the promotion of collaborative acute-care networks to ensure people 'get the right care, at the right time, in the right place from the right person', which will involve strategies to guarantee methods of transfer to the nearest hospital capable of providing definitive care, to maximise the skills and integration of service providers and to maximise the current expertise and skills of rural practitioners
- the further promotion of the role that new technology (for example, Healthline) has in increasing rapid access to services and providing certainty
- directors of rural health in North and South Islands.¹⁵⁶

Primary Health Care Strategy

The six key directions of the Primary Health Care Strategy are to:

- work with local communities and enrolled populations
- identify and remove health inequalities
- offer access to comprehensive services to improve, maintain and restore people's health
- co-ordinate care across service areas

¹⁵⁴ Minister of Health. 2000. *New Zealand Health Strategy*. Wellington: Ministry of Health. p 12.

¹⁵⁵ Minister of Health. 2000. *New Zealand Health Strategy*. Wellington: Ministry of Health. p vii.

¹⁵⁶ Minister of Health. 2000. *New Zealand Health Strategy*. Wellington: Ministry of Health. p 23.

- develop the primary health care workforce
- continuously improve quality, using good information.¹⁵⁷

More specific to rural communities the strategy notes the difficulty in attracting and retaining rural workforce. It specifies the following action:

The Ministry of Health will facilitate the development of a coherent approach to rural health service provision including the difficult issues of attracting and retaining appropriate workforce. This work will involve local communities and Māori and District Health Boards.¹⁵⁸

Implementing the Primary Health Care Strategy in Rural New Zealand

Implementing the Primary Health Care Strategy in Rural New Zealand: A Report from the Rural Expert Advisory Group to the Ministry of Health is the most extensive document outlining a direction for rural health.¹⁵⁹ However, it is not a comprehensive plan for all rural health services. As the title suggests, its focus is on primary health care. The ultimate goal of the plan is to achieve accessible and appropriate primary health care services for people living in rural New Zealand.

The three aims prevailing in this document are to:

- create a context for realising opportunities and supporting locally devised solutions to issues in primary health care
- ensure equitable and effective access to an appropriate range of quality primary health care services, which are delivered within the rural community or within acceptable travel times
- develop, maintain and recruit a skilled, multidisciplinary rural workforce that works in partnership (ie, in a co-operative, co-ordinated and collaborative manner).¹⁶⁰

Recommendations are made under each of the above aims with a total of 52 recommendations. Many of the recommendations focus on primary health organisations (PHOs), which are viewed as the most appropriate organisations to deliver local solutions for diverse rural communities. For instance, the report recommends:

- develop a primary health care premium to provide extra financial support to PHOs encompassing rural areas to allow them to flexibly develop local solutions for local needs to ensure sustainable services and retention of the rural workforce

¹⁵⁷ Minister of Health. 2001. *The Primary Health Care Strategy*. Wellington: Ministry of Health. p 7.

¹⁵⁸ Minister of Health. 2001. *The Primary Health Care Strategy*. Wellington: Ministry of Health. p 23.

¹⁵⁹ Rural Expert Advisory Group. 2002. *Implementing the Primary Health Care Strategy in Rural New Zealand: A report from the Rural Expert Advisory Group to the Ministry of Health*. Wellington: Ministry of Health. [www.moh.govt.nz/moh.nsf/0/E371A046A4A44994CC256C0D0017DE98/\\$File/RuralPrimaryHealthStrategyImplementation.pdf](http://www.moh.govt.nz/moh.nsf/0/E371A046A4A44994CC256C0D0017DE98/$File/RuralPrimaryHealthStrategyImplementation.pdf).

¹⁶⁰ Rural Expert Advisory Group. 2002. *Implementing the Primary Health Care Strategy in Rural New Zealand: A report from the Rural Expert Advisory Group to the Ministry of Health*. Wellington: Ministry of Health. [www.moh.govt.nz/moh.nsf/0/E371A046A4A44994CC256C0D0017DE98/\\$File/RuralPrimaryHealthStrategyImplementation.pdf](http://www.moh.govt.nz/moh.nsf/0/E371A046A4A44994CC256C0D0017DE98/$File/RuralPrimaryHealthStrategyImplementation.pdf). p 4.

- develop national rural initiatives when there are clear efficiency reasons for undertaking them at national level (for example, recruitment and funding postgraduate training programmes)
- establish a director of rural health (nursing) in the South and North Island (while ensuring that the South Island and North Island directorships are equitably funded)
- develop a strong rural team under senior-level leadership within the Ministry of Health to deal with all rural health issues
- undertake further work on the rural adjuster so that it is distributed in an equitable manner
- review the PRIME (Primary Response in Medical Emergencies) project in conjunction with the Accident Compensation Corporation, including consideration of legal protection, remuneration for medical emergencies and contracting arrangements
- support the development and expansion of primary health care models that integrate mental health service provision in a way that is effective for rural areas.

The Disability Strategy

The Disability Strategy aims to advance New Zealand towards an 'inclusive society' that 'highly values' the lives of disabled people.¹⁶¹ To this end the strategy proposes 14 objectives. The objectives cover a broad range of matters including (but not limited to) education, housing, public transport, health, recreation and support for caregivers.

Objective 8 and sub-objectives 8.2 and 8.4 are of most relevance has most relevance to rural health:

- 8.0: Support quality living in the community for disabled people¹⁶²
- 8.2: Support disabled people living in rural areas to remain in their own communities by improving their access to services¹⁶³
- 8.4: Ensure disabled people are able to access appropriate health services within their community.¹⁶⁴

¹⁶¹ Ministry of Disability Issues. The New Zealand Disability Strategy. 2001. p.1. URL: <http://www.odi.govt.nz/documents/publications/nz-disability-strategy.pdf>

¹⁶² Ministry of Disability Issues. The New Zealand Disability Strategy. 2001. p.22. URL: <http://www.odi.govt.nz/documents/publications/nz-disability-strategy.pdf>

¹⁶³ Ministry of Disability Issues. The New Zealand Disability Strategy. 2001. p.22. URL: <http://www.odi.govt.nz/documents/publications/nz-disability-strategy.pdf>

¹⁶⁴ Ministry of Disability Issues. The New Zealand Disability Strategy. 2001. p.22. URL: <http://www.odi.govt.nz/documents/publications/nz-disability-strategy.pdf>

He Korowai Oranga: The Māori Health Strategy

The two goals specific to Māori health set out in the New Zealand Health Strategy are:

- reduce health inequalities by ensuring accessible and appropriate services for Māori
- improve Māori health development by, among other things, building the capacity of Māori to participate at all levels of the health sector.

He Korowai Oranga: The Māori Health Strategy builds on these goals and expands on the principles and objectives of the New Zealand Health Strategy and New Zealand Disability Strategy by providing more detail on how Māori health objectives will be achieved.¹⁶⁵

The strategy takes account of the relationship between iwi and the Crown under the Treaty of Waitangi through the three principles of Partnership, Participation and Protection.

- Partnership: Working together with iwi, hapū, whānau and Māori communities to develop strategies for Māori health gain and appropriate health and disability services.
- Participation: Involving Māori at all levels of the sector, in decision-making, planning, development and delivery of health and disability services.
- Protection: Working to ensure Māori have at least the same level of health as non-Māori, and safeguarding Māori cultural concepts, values and practices.

The overall aim of He Korowai Oranga is whānau ora: Māori families supported to achieve their maximum health and wellbeing. The outcomes sought include that whānau:

- experience physical, spiritual, mental and emotional health and have control over their own destinies
- members live longer and enjoy a better quality of life
- members (including those with disabilities) participate in te ao Māori (the Māori world) and wider New Zealand society.

These outcomes are more likely if whānau:

- are cohesive, nurturing and safe
- are able to give and receive support
- have a secure identity, high self-esteem, confidence and pride
- have the necessary physical, social and economic means to participate fully and to provide for their own needs
- live, work and play in safe and supportive environments.

He Korowai Oranga does not, however, specifically mention rural health.

¹⁶⁵ Minister of Health, Associate Minister of Health. 2002. *He Korowai Oranga: Māori Health Strategy*. Wellington: Ministry of Health.

Whakatātaka Tuarua: The Māori Health Action Plan 2006–2011

The Whakatātaka Tuarua: The Māori Health Action Plan 2006–2011 sets objectives for the Ministry of Health, District Health Boards (DHBs) and other stakeholders to improve the health of Māori.¹⁶⁶ The plan continues support for Māori provider development including a commitment by DHBs and the Ministry of Health to develop a sustainable provider development framework. The number of Māori health providers has increased from 20 in 1992 to approximately 280 in 2009. As more providers have emerged, the geographical coverage has significantly increased improving access to health services for Māori in urban and rural areas.

Roadside to Bedside Framework

The Roadside to Bedside Framework was developed in 1999 by the Ministry of Health in conjunction with the Health Funding Authority and Accident Compensation Corporation.¹⁶⁷ The purpose of the framework is to articulate the key principles and components of a system that will enable all New Zealanders to gain timely and appropriate access to acute personal health services: trauma, medical and surgical emergencies, and complicated births. As such, it has particular significance for those who live or regularly travel far from hospitals. The framework specifically comments on the opportunities presented for the rural health sector with telemedicine, stating:

telemedicine is increasingly being used to allow specialist expertise to be more widely accessible. Reading x-rays and CT scans remotely can be of particular value in determining whether or not a patient needs to be transported to another facility.

Further to this, the framework notes the need for:

- a flexible workforce, for example, midwives could be used to assist ambulance officers, or practice nurses could be used in a rural nurse practitioner capacity, or GPs and paramedical staff could give thrombolysis (streptokinase) to patients undergoing a heart attack
- quality people-management systems to ensure that professionals, especially those working in rural areas, feel supported and able to remain in practice
- access to ongoing clinical education and training for the rural workforce.

¹⁶⁶ Minister of Health, Associate Minister of Health. 2006. *Whakatātaka Tuarua: The Māori Health Action Plan 2006–2011*. Wellington: Ministry of Health.

¹⁶⁷ Ministry of Health. 1999. *Roadside to Bedside: A 24-hour clinically integrated acute management system for New Zealand*. Wellington: Ministry of Health.

Rural Health Policy: Meeting the needs of rural communities

In 1999 the Government released its Rural Health Policy: Meeting the needs of rural communities.¹⁶⁸ A change of government immediately after the policy was released appears to have affected its implementation. The policy's nine aims are to:

- enable rural people to receive effective frontline care in their own community
- organise services around people and their needs
- recognise the diversity of New Zealand's rural communities and their differing needs
- provide timely access to acute emergency services of an agreed standard of care
- use technology where possible to reduce the impact of isolation
- establish effective alliances and networks between providers (for example, integrated care organisations, regional referral patterns)
- develop and maintain skills in rural services
- offer greater certainty about access to services of a consistent agreed standard
- create opportunities for rural communities to develop local arrangements that meet their needs.

The policy summarised familiar concerns, including:

- the recruitment and retention of rural health workers
- the isolation of the workforce with an associated lack of peer support
- the short supply of disability support services particularly for those with complex needs
- a need for improvement in rural acute and emergency services
- the difficulty in balancing the desire for convenient local services against the cost of providing such services or the risk such services are inadequate or unsafe.

Funding

This section provides background information about current funding mechanisms.

Population-based funding formula

The population-based funding formula (PBFF) determines the share of funding to be allocated to each DHB, based on the population living in each district.¹⁶⁹ The aim of the PBFF is to fairly distribute available funding between DHBs according to the relative needs of their populations and the cost of providing health and disability support services to meet those needs. The PBFF is designed to give each DHB the same opportunity, in terms of resources, to respond to the needs of its population. The additional costs of providing health

¹⁶⁸ Minister of Health. 1999. *Rural Health Policy: Meeting the needs of rural communities*. Wellington: Ministry of Health.

¹⁶⁹ The PBFF does not determine the overall level of funding.

care services to rural communities, largely costs associated with small-scale supply, are accounted for through an adjustment to the PBFF known as the rural adjuster.

Rural adjuster

The PBFF includes a rural adjuster to offset the unavoidable extra costs DHBs face in providing health services to rural populations. These costs are due to:

- hospital facilities with low throughput not having access to economies of scale
- the provision of services to sparsely populated and/or remote areas
- the extra costs of both inter- and intra-DHB travel
- DHBs with small populations dealing with the challenge of operating to economies of scale with regard to their management overheads.¹⁷⁰

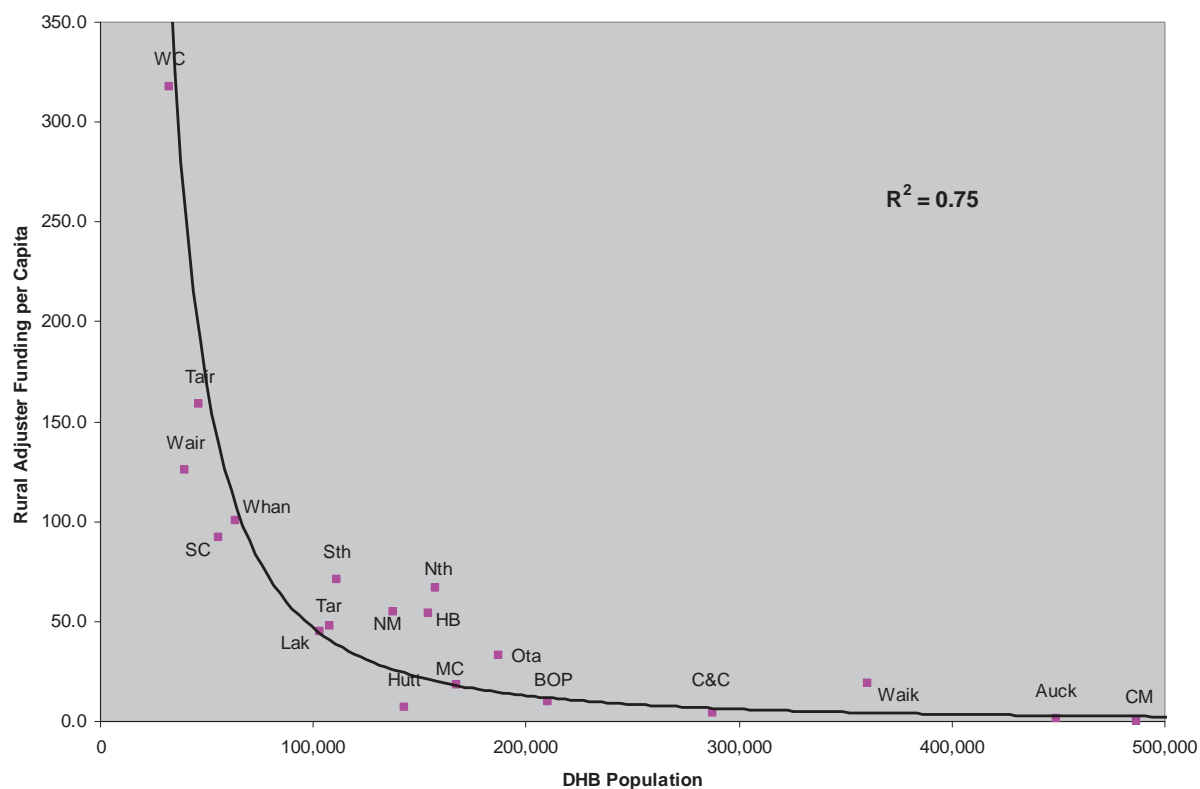
A variety of community and primary health care-based rural payments under existing provider contracts have also been included in the rural adjuster. In particular, payments made to practices in rural areas to assist in GP recruitment and retention have been included. The rural adjuster also includes price premiums paid to rural maternity providers in situations when the volume of births is below the threshold level expected of a metropolitan maternity provider.

The Ministry of Health reviewed the rural adjuster in 2004 and 2008. The 2004 review determined a new allocation between DHBs for the rural adjuster pool. Generally, DHBs with small-to-medium-size populations gained an increased share of the rural adjuster pool under the new model, whereas DHBs with larger populations were allocated a reduced share. An exception to this pattern was West Coast DHB. West Coast DHB received the highest per capita funding and the highest total funding. However, the 2004 model allocated \$719,000 less than the 2003 model. Another exception was Otago DHB, which received an increased share of funding under the 2004 model. This increase is because the 2003 model did not account for the cost of providing rural hospital services through community trusts.

Figure 9 shows a strong inverse relationship between funding per capita under the 2004 rural adjuster model and DHB population. The line fitted to the results shows that for most DHBs, a simple model based on population size explains results. The West Coast DHB is a clear outlier, with funding per capita double that of the next DHB.

¹⁷⁰ A certain minimum management overhead is required to run a DHB. For small DHBs this overhead contributes to services to fewer people than for DHBs that serve larger populations. In effect this contributes to the marginal cost of delivering services being higher for smaller DHBs than for larger DHBs.

Figure 9: Rural adjuster funding per capita and District Health Board population, 2004



KEY – District Health Boards on the Funding Graph

WC	West Coast	Tar	Taranaki	Hutt	Hutt Valley
Tair	Tairāwhiti	Lak	Lakes	Ota	Otago
Wair	Wairarapa	NM	Nelson Marlborough	BOP	Bay of Plenty
Whan	Whanganui	Nth	Northland	C&C	Capital and Coast
SC	South Canterbury	HB	Hawkes Bay	Waik	Waikato
Sth	Southland	MC	Mid Central	Auck	Auckland
CM	Counties Manukau				

Appendix 5: Demographics of District Health Board areas visited

Demographic profiles

This appendix provides brief demographic profiles of the four District Health Boards (DHBs) with large rural populations the National Health Committee (NHC) visited: Northland, Waikato, Tairāwhiti and West Coast. Looking at these districts side by side illustrates some of the intra-rural differences that have an effect on health outcomes and service delivery (Table 7).

Table 7: Demographic profiles of District Health Boards the National Health Committee visited

Demographic variable	Northland	Waikato	Tairāwhiti	West Coast	New Zealand
Population	152,700	350,200	45,900	32,100	4,027,947
Population change 1996–2006 (%) ¹	9.3	9.1	-1.3	-3.8	11.3 ²
Proportion in Remote, Low and Moderate Areas ³ (%)	39.9	19.3	22.7	42.4	11.0
Proportion in Independent Urban Areas (%)	18.0	20.9	n/a	57.6	11.0
Proportion aged under 15 (%)	23.4	22.5	25.8	20.3	22
Proportion aged 65 and over (%)	14.5	12.6	11.9	13.9	12.3
Proportion Māori (%)	29.3	21.1	46.9	9.8	14.0
Median personal income (\$)	20,900	23,700	20,600	20,400	24,400
Unemployment rate ⁴ (%)	8.3	6.8	7.3	3.1 ⁵	6.0
Proportion in NZDep06 ⁶ deciles 9 and 10 (%)	32.8	24.1	45.5	15.7	20.0

Notes

1 Ministry of Health.

2 Statistics New Zealand, Census of Population and Dwellings 1996 and 2006 usually resident population.

3 Remote, Low and Moderate Areas = Highly Rural/Remote Areas, Rural Areas with Low Urban Influence, and Rural Areas with Moderate Urban Influence (from the Statistics New Zealand Urban/Rural Profile. See Appendix 7 for an explanation).

4 Household Labour Force Survey June 2009; available by region (not District Health Board).

5 Unemployment rate is reported for the whole of Tasman, Nelson, Marlborough and West Coast region.

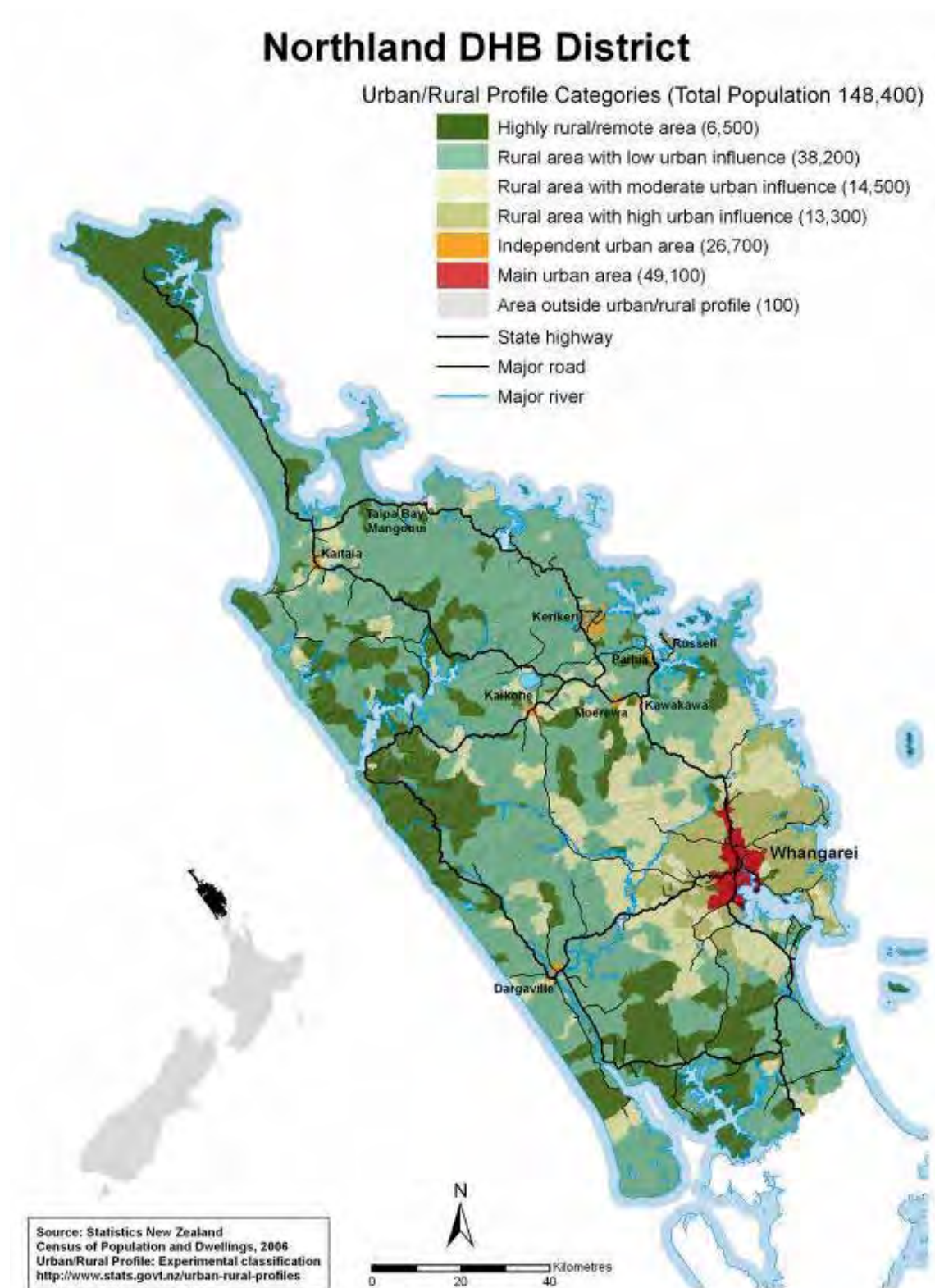
6 NZDep06 = 2006 New Zealand Index of Deprivation.

Source (unless otherwise noted): Statistics New Zealand, Census of Population and Dwellings 2006.

Each DHB district has unique characteristics. Among these four districts, the share of population in Highly Rural/Remote Areas and Rural Areas with Low and Moderate Urban Influence ranges from 19 percent to 42 percent. The West Coast, with a small and shrinking population, contrasts with Northland and Waikato, both growing at almost 1 percent per year. Tairāwhiti is home to the largest proportion of Māori (47 percent) compared with the West Coast (9 percent) and Waikato (21 percent). Greatest deprivation is seen in Tairāwhiti (46 percent of the population live in deciles 9 and 10 census area units) followed by Northland (33 percent), Waikato (24 percent) and the West Coast (16 percent).

The maps in Figures 10–17 show the Urban/Rural Profile differences in each of the four DHB districts visited and the New Zealand Deprivation Index for each DHB.

Figure 10: Urban/Rural Profile, Northland District Health Board



Note: Population figures have been rounded to the nearest 100.

Figure 11: Areas of highest socioeconomic deprivation, Northland District Health Board

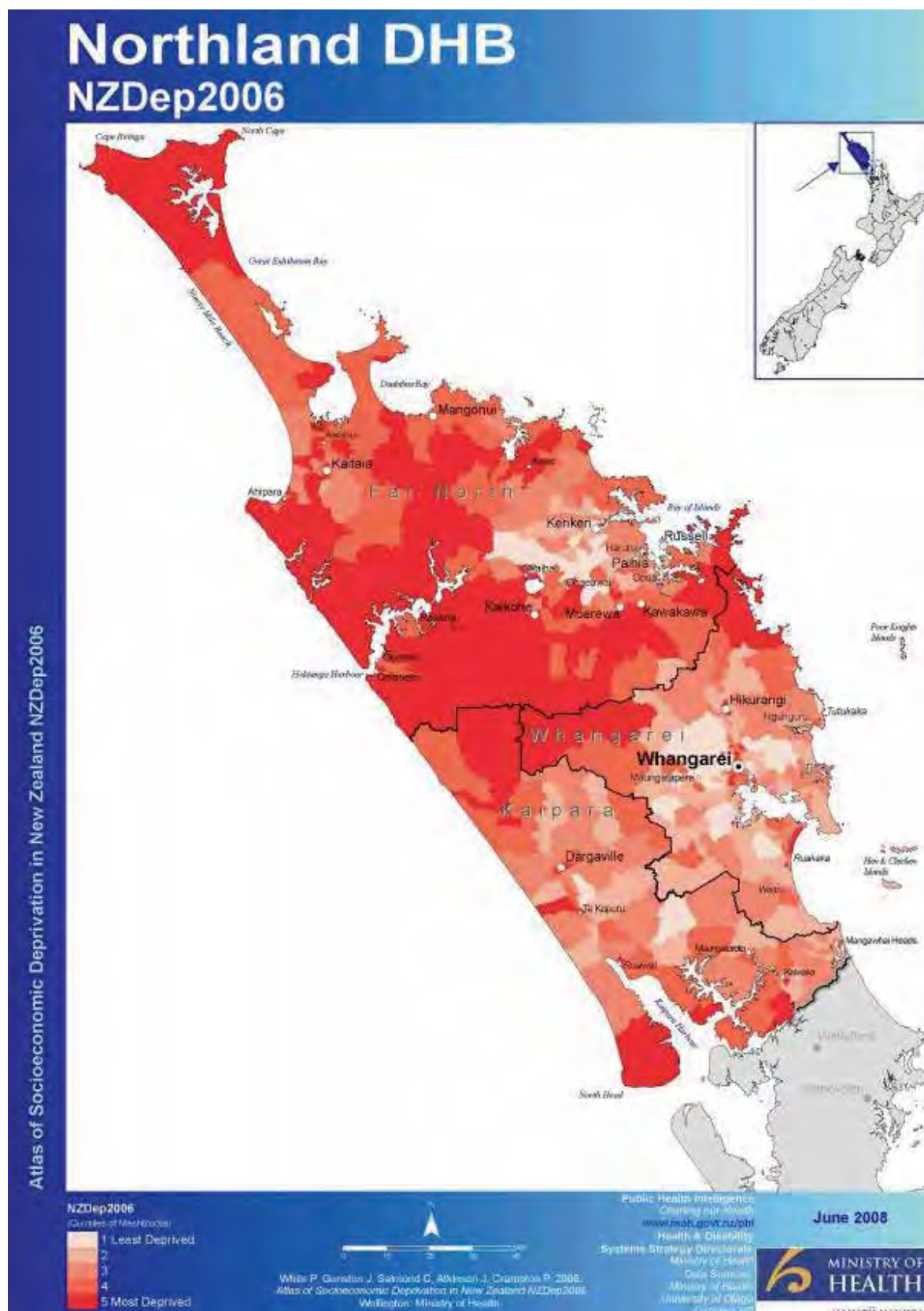
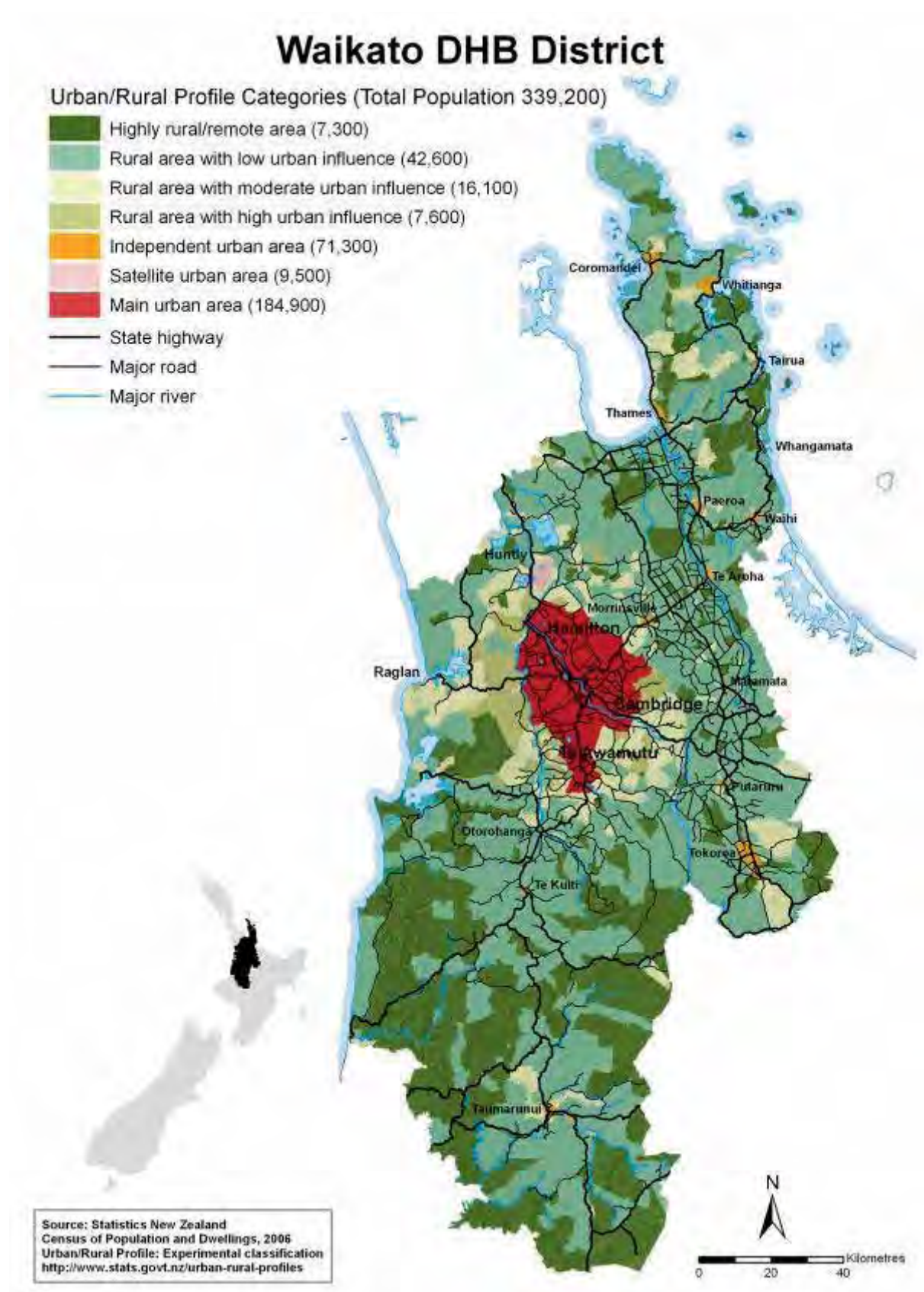


Figure 12: Urban/Rural Profile, Waikato District Health Board



Note: Population figures have been rounded to the nearest 100.

Waikato DHB NZDep2006

Atlas of Socioeconomic Deprivation in New Zealand NZDep2006

NZDep2006
Quintiles of New Zealand

1	Least Deprived
2	
3	
4	
5	Most Deprived

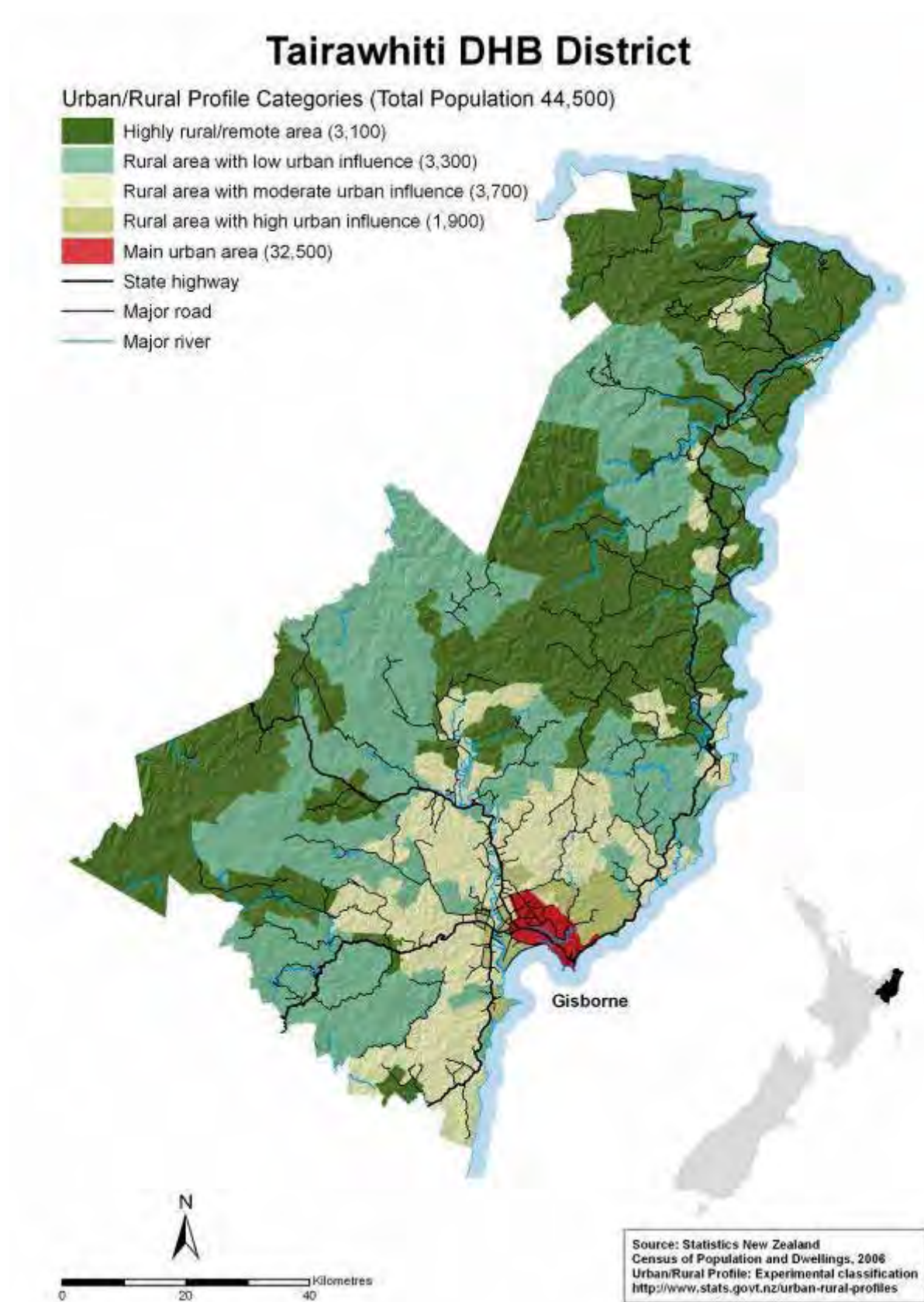
Public Health Intelligence
Creating Our Health
www.health.govt.nz/ph
Health & Disability
Systems Strategy Directorate
Ministry of Health
Dale Stammers
Ministry of Health
University of Otago

June 2008

MINISTRY OF HEALTH

White P, Gureston J, Salmon C, Atkinson J, Crampton P. 2006.
Atlas of Socioeconomic Deprivation in New Zealand NZDep2006
Wellington: Ministry of Health.

Figure 14: Urban/Rural Profile, Tairāwhiti District Health Board



Note: Population figures have been rounded to the nearest 100.

Figure 15: Areas of highest socioeconomic deprivation, Tairāwhiti District Health Board

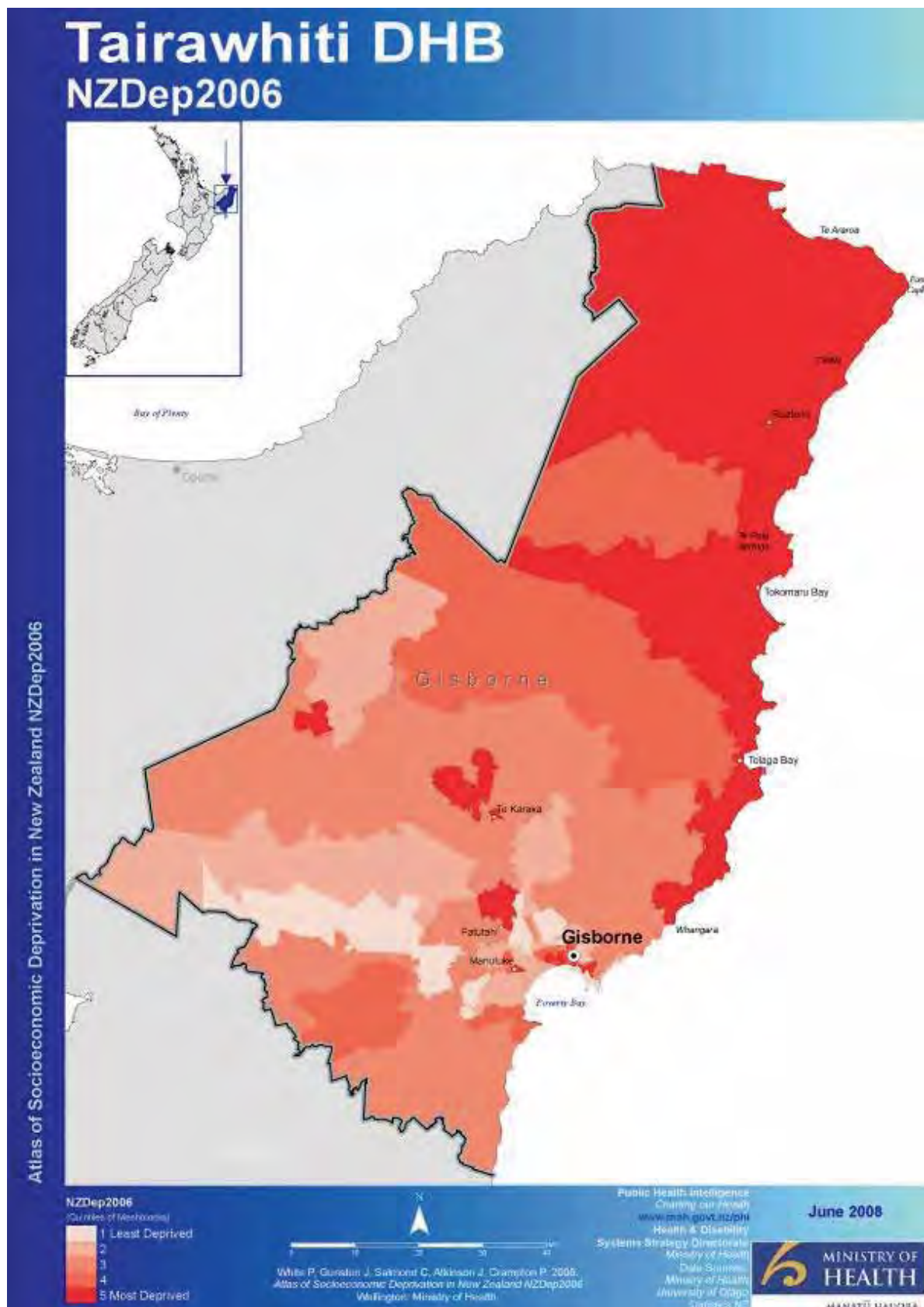
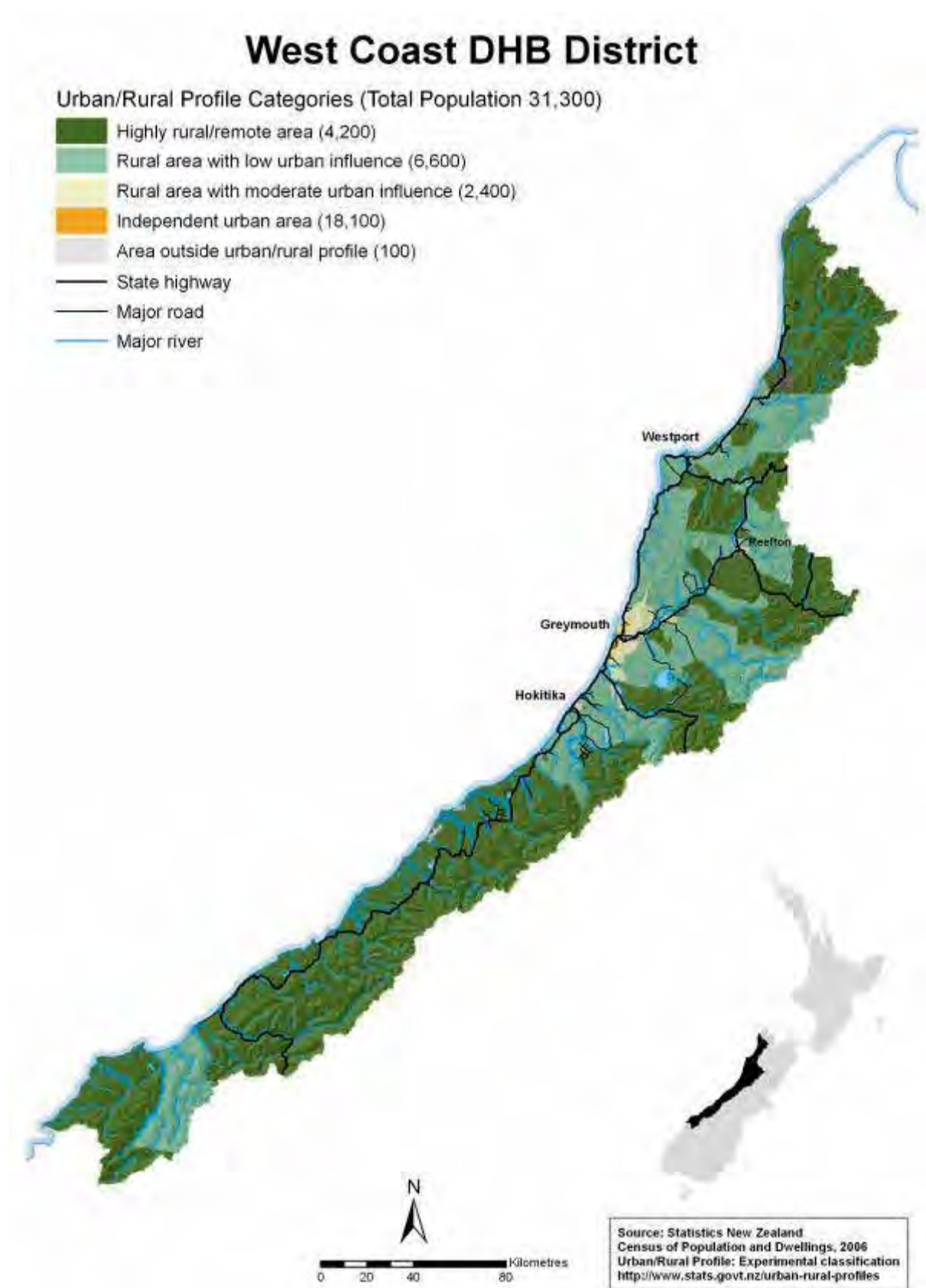
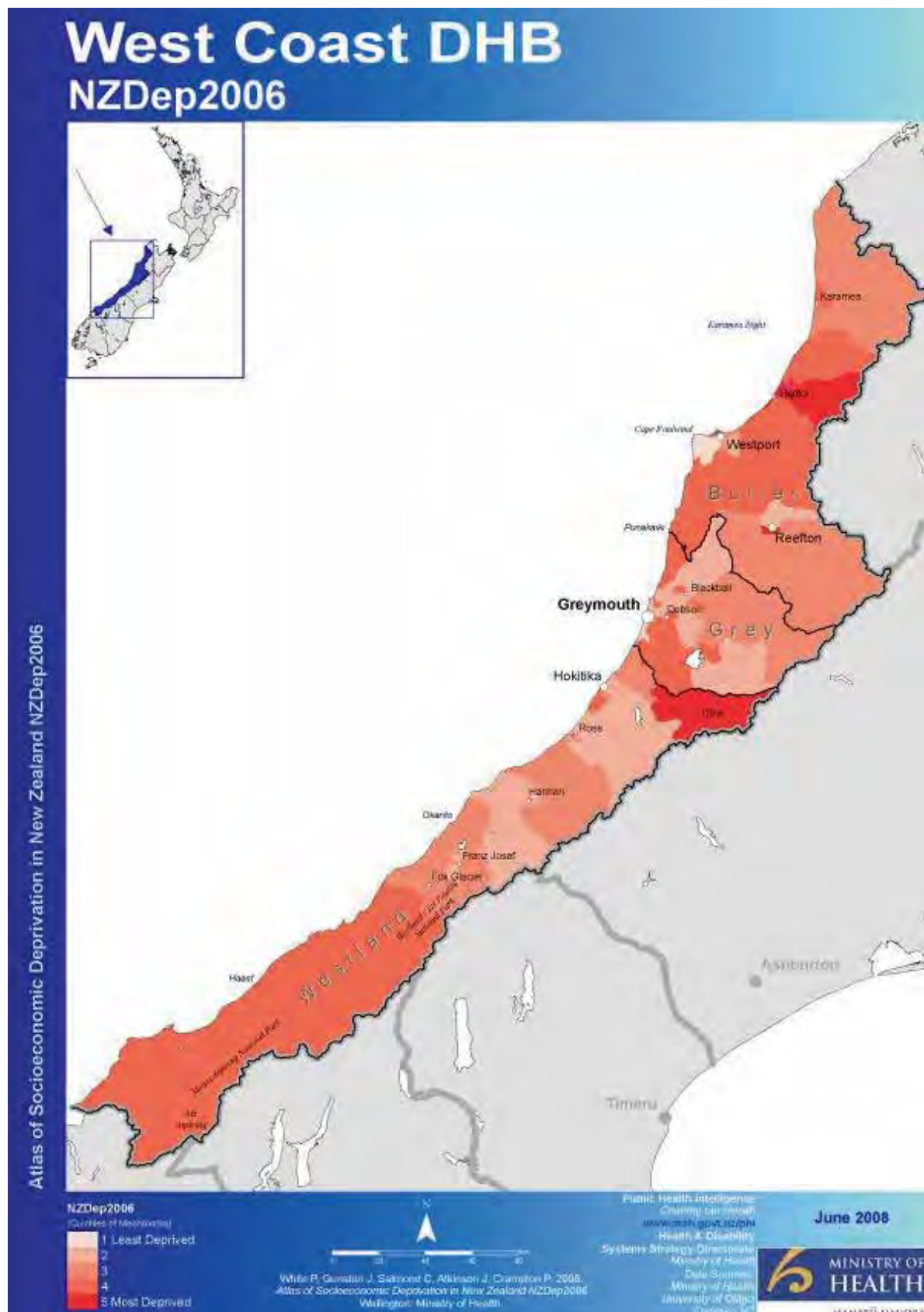


Figure 16: Urban/Rural Profile, West Coast District Health Board



Note: Population figures have been rounded to the nearest 100.

Figure 17: Areas of highest socioeconomic deprivation, West Coast District Health Board



Appendix 6: National Health Committee consultation visits to District Health Board areas

The National Health Committee (NHC) made a series of consultation visits within four District Health Board (DHB) areas (Northland, Waikato, Tairāwhiti and West Coast) and met with people from a variety of organisations, groups and committees.

Northland District Health Board (Te Tai Tokerau) visit

Committee members: Gwen Tepania-Palmer, Robin Kearns, Phil Shoemack

Date: 14–15 June 2007

Rural Health project sponsors and secretariat staff met with representatives from a variety of organisations and networks including:

- Hokianga Health Enterprise Trust
- Hauora Whānui Youth Health Service Clinic
- Ngāti Hine Health Trust¹⁷¹
- Te Tai Tokerau Māori Strategic Alliance (included representatives from over ten Māori provider organisations)
- Omapere Clinic (included stopovers at Pakanae and Whirinaki to see marae development projects).

Waikato District Health Board visit (1)

Committee members: Phil Shoemack, Api Talemaitoga, Maaka Tibble, Will Taylor

Date 4–5 July 2007

Rural Health project sponsors and secretariat staff met with representatives from a variety of organisations and networks including:

- Waikato DHB senior management
- Waikato Primary Health Organisation (PHO)

¹⁷¹ The Ngāti Hine Health Trust was established in 1992. The trust delivers a range of mobile services, including residential and community health, and other social and economic programmes, to meet the health and wellbeing needs of Northland people.

- New Zealand Institute of Rural Health¹⁷²
- Te Korowai Hauora o Hauraki/Hauraki PHO
- Waikato DHB Community Health Forum.

Waikato District Health Board visit (2)

Committee members: Phil Shoemack, Api Talemaitoga, Maaka Tibble
Date 22–23 November 2007

Rural Health project sponsors and secretariat staff met with representatives from a variety of groups and organisations, including:

- Waikato DHB senior management
- Toi Ora PHO
- Te Kahao Health
- Hauraki PHO/Te Korowai Hauora o Hauraki
- Pinnacle Group Ltd¹⁷³
- Order of St John (Rural Community First Responder Initiative)
- Eastbay Connection Ltd
- South Waikato Pacific Island Health Committee
- Waikato Pacific Health Trust
- Raukawa Health Services
- Tokoroa Hospital (manager)
- Tokoroa Elderly Activity Centre.

Tairāwhiti District Health Board visits

Two areas were visited in Tairāwhiti, Ngāti Porou and Tūranganui-a-Kiwa.

Tairāwhiti visit – Ngāti Porou

Committee members: Linda Holloway, Maaka Tibble
Date: 21–22 June 2007

¹⁷² The New Zealand Institute of Rural Health is a charitable trust established in 2001. The institute works to improve the health status of rural based people as a priority in research and teaching, rural health status (including the health of rural Māori), workforce development, resource and resource utilisation, and service delivery.

¹⁷³ **Pinnacle Group Ltd** is a management services organisation that provides a range of services to support PHOs and general practices.

Rural Health project sponsors and secretariat staff met with representatives from a variety of organisations and networks including:

- Ngāti Porou Hauora PHO Board¹⁷⁴
- Te Puia Springs Hospital
- Tokomaru Bay Community representatives
- Rangitukia community representatives (on Hinepare Marae)
- Ruatoria Māori Women's Welfare League
- Ruatoria Order of St John's Ambulance
- East Coast Medical Services
- Hauiti Hauora.

Tairawhiti visit – Tūranganui-a-Kiwa¹⁷⁵

Committee members: Robin Kearns, Phil Shoemack, Maaka Tibble

Date: 9–10 October 2007

Rural Health project sponsors and secretariat staff met with representatives from a variety of organisations, including:

- Te Hauora o Tūranganui-a-Kiwa (Turanga Health),¹⁷⁶ including participants of the Kaumātua Programme on Tapuihikitia Marae – Puha
- Tairawhiti DHB senior management team
- Matawai and Motu communities
- Matawai Fire Brigade
- Matawai Women's Group
- Matawai Health Committee
- Motu school principal and Motu Board of Trustees chairperson
- Matawai Play Centre
- rural health nurse
- Waikohu Medical Centre Practice Manager
- Disabilities Focus Group
- Age Concern, Tairawhiti
- Accident Compensation Corporation
- LIFE Unlimited needs assessor/service co-ordinator

¹⁷⁴ Ngāti Porou Hauora is owned and governed by Ngāti Porou. Primary health services are provided in seven community clinics (including Te Puia Hospital).

¹⁷⁵ The visit was supported by Turanga Health, which provided a wheelchair-accessible vehicle, driver, and caregiver for the two days for a member of the Secretariat.

¹⁷⁶ The three iwi of Tūranganui-a-Kiwa – Rongowhakaata, Ngai Tamanuhiri and Te Aitanga-a-Mahaki – are the principal shareholders of Te Hauora o Tūranganui-a-Kiwa (Turanga Health). More than 20 active marae are within the boundaries of Tūranganui-a-Kiwa, each of which plays a key role in developing and providing health services in the region.

- Te Kupenga, Mental Health Services
- Stewart Centre, Brain Injury
- LIFE Unlimited Disability Resource Centre
- IDEA Services
- Stroke Foundation field officer
- Foundation of the Blind
- CCS Disability Support.

West Coast District Health Board visit

Committee members: Maaka Tibble, Phil Shoemack

Date 10–12 September 2007

Rural Health project sponsors and secretariat staff met with representatives from a variety of organisations, including:

- West Coast DHB executive management team
- West Coast PHO board members and staff
- Rata Te Awhina Trust¹⁷⁷
- Te Rūnanga o Makaawhio
- Whataroa Health Clinic
- Franz Josef Health Clinic
- Fox Glacier Health Clinic.

The NHC attended a Community Agencies Forum that included the:

- Disability Information Centre
- Cancer Society
- Stroke Foundation
- Home Hospice Trust.

The NHC attended a meeting on chronic conditions, with representatives including:

- the Cancer Strategy Group
- the Chronic Conditions Group
- the Local Diabetes Team
- Planning and Funding
- clinical nursing specialists.

¹⁷⁷ Rata Te Awhina Trust is a Māori provider (a non-governmental organisation) that delivers health and social outreach services from Karamea to Haast.

Themes from National Health Committee visits

The following sections provide a snapshot of the themes, views and information that assisted the NHC in its development of this report.

Community support

The NHC heard in relation to community support that:

- the community trust model was well supported with strong community participation and input into governance, management and ongoing development
- strong leadership is required to drive and support the establishment and ongoing development of new service models.

Workforce

Although the focus for the NHC project was not on the health and disability workforce, the NHC heard of considerable difficulties most rural areas faced in achieving a sustainable workforce.

- There is an extreme dependence on individual staff, so the service can swing from 'fully staffed' to crisis in the blink of an eye.
- The decision for doctors to enter rural practice often relies on factors, such as the level of collegial support, and the availability of job opportunities for their partners and schooling for their children. Many GPs go into a rural practice late in their career and may prefer part-time hours.
- The cost to get medical locum cover is significant.
- Becoming a nurse practitioner in rural primary care is difficult due to issues around scopes of practice. It is perceived to be easier to be a nurse practitioner in a city because there are greater opportunities for specialisation.
- Additional funding support is needed for the continuing education of health practitioners, especially because of high travel costs and locum cover for time away that is involved. Suggestions were made for interactive education online to be developed to assist with maintaining clinical competencies.
- Finding suitable staff to sustain 24/7 cover for rural ambulance services is an ongoing problem.
- Intensive marketing is needed in rural schools about medicine and nursing as career pathway (eg, targeting scholarships).

The use of nurses needs to be extended and other roles need to be developed and extended. The NHC heard:

- Nurses in rural areas play a key role in co-ordinating care and directing people to services (for example, ensuring follow up care on discharge) and between services. Nurses know the community and have the connections, so can organise things based on this knowledge. On home visits related to physical care (for example, chronic illness) nurses often identify other needs (for example, the needs of children and communication problems such as a lack of transport or no phone)
- Kaiāwhina play an important role because they relate well to Māori clients and support interactions with health professionals.

Disability and aged care supports

The NHC heard the following in relation to disability and aged care supports.

- There is an unmet need for respite care.
- Whānau networks are not always able to care for Māori elders at home as they did in the past.
- Funding for non-government organisations is insecure. Funding is generally only available year by year, and sometimes only on a 'pilot basis'. This means many programmes are unsustainable in the long term.
- Disability supports funding needs to be better co-ordinated because providers often have to negotiate different contracts with multiple funders.

Transport

Transport costs are a significant barrier to access to primary and secondary health services for many people in rural areas. The NHC heard concerns for many older people and poor people living in rural areas without cars.

- Some providers do provide transport assistance. It was suggested some Māori providers could not have achieved 85–100 percent immunisation cover (meningitis) without providing transport assistance for whānau in remote areas.
- Many people found assistance under the National Travel and Accommodation Policies too restrictive.

Issues about access to specialist services and distances to travel to secondary and tertiary services were raised during the consultation visits. The NHC heard there is a need to get more secondary services into rural hospitals and to bring specialists into the regions to run outpatient clinics to provide better access for their populations. This would also enable rural hospital/primary care staff to be present to ensure the right questions were asked and to deal with language barriers.

Contract management

The pressures providers experienced in relation to managing contracts and auditing and monitoring requirements were raised. The NHC heard:

- there was a desire by some providers to foster whānau to have responsibility for their health and wellbeing by providing programmes with support from the Ministry of Health, the Ministry of Social Development and Te Puni Kōkiri, and to have integrated contracts with longer-term outcome measures
- concerns that opportunities to maintain current innovations in services were beginning to be lost due to funding cuts in some DHBs.

General observations

The NHC also heard that:

- confidentiality and privacy are critical factors to ensuring ongoing access to services, especially in small rural communities
- rongoā Māori (medicines) were still used widely in many rural areas and people did not want the practice regulated.

Appendix 7: Statistics New Zealand's Urban/Rural Profile explained

Standard classification of rurality

In 2005, recognising that the official urban–rural typography masked intra-rural differences, Statistics New Zealand developed an experimental classification system, the Urban/Rural Profile. This system classifies areas of New Zealand into seven categories based on population density and weighted proportions of the resident population who work in an urban area (defined according to the official typography as main, secondary and minor urban areas). These commuter populations have ready access to urban services and retail, and this access is seen to contribute to 'urban influence' on a community. This report uses the Urban/Rural Profile classification of rurality.¹⁷⁸

Categories

The seven areas in the Urban/Rural Profile are:

- Highly Rural/Remote Areas
- Rural Area with Low Urban Influence
- Independent Urban Area
- Rural Area with Moderate Urban Influence
- Rural Area with High Urban Influence
- Satellite Urban Community
- Main Urban Area

The figures in the sections below are from the 2006 Census of Population and Dwellings.

Highly Rural/Remote Area

Highly Rural/Remote Areas:

- contain 48.4 percent of New Zealand's land area
- are home to 1.6 percent of the population

¹⁷⁸ See Statistics New Zealand. No date. *Defining Urban and Rural New Zealand*. www.stats.govt.nz/Publications/BusinessPerformanceEnergyAndAgriculture/urban-rural-profile/defining-urban-rural-nz.aspx.

- have a population density of 0.5 people per square kilometre
- are rural areas where there is minimal dependence on urban areas in terms of employment, or where there is a very small employed population.

Rural Area with Low Urban Influence

Rural Areas with Low Urban Influence:

- contain 35.8 percent of New Zealand's land area
- are home to 5.5 percent of the population
- have a population density of 2.3 people per square kilometre
- are defined as areas with a strong rural focus, in which the majority of the population in these areas works in a rural area
- are areas where it is unlikely that many people living in these areas are employed in a main urban area, although some may work in a minor urban area.

Independent Urban Area

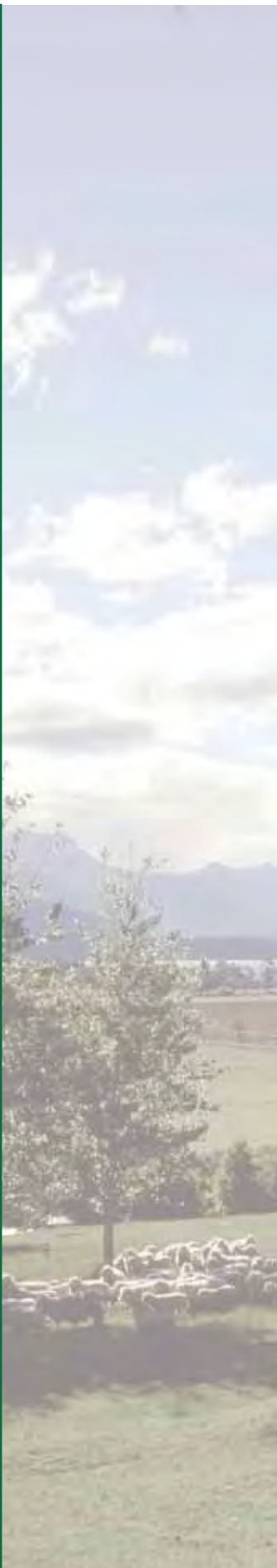
Independent Urban Areas:

- contain 0.6 percent of New Zealand's land area
- are home to 11.0 percent of the population
- have a population density of 266.2 people per square kilometre
- are defined as towns and settlements without significant dependence on main urban centres
- have less than 20 percent of their usually resident employed population's workplace address in a main urban area.

Rural Area with Moderate Urban Influence

Rural Areas with Moderate Urban Influence:

- contain 9.3 percent of New Zealand's land area
- are home to 3.8 percent of the people
- have a population density of 6.3 people per square kilometre
- are defined as areas where a large percentage of the resident employed population works in a minor (population 1,000–9,999) or secondary (population 10,000–29,999) urban area, or a significant percentage (but less than in an area of high urban influence) works in a main urban area.



Rural Health: Challenges of Distance Opportunities for Innovation

National Health Committee on Health and

Rural Area with High Urban Influence

Rural Areas with High Urban Influence:

- contain 2.8 percent of New Zealand's land area
- are home to 3.1 percent of the population
- have a population density of 12.5 people per square kilometre
- are peri-urban, urban fringe or rural belt areas close to main urban areas
- have a significant proportion of their resident population working in a main urban area.

Satellite Urban Community

Satellite Urban Communities:

- contain 0.2 percent of New Zealand's land area
- are home to 3.2 percent of the population
- have a population density of 292.1 people per square kilometre
- are towns and settlements with strong links to main urban centres
- are urban areas (other than main urban areas) where 20 percent or more of the usually resident employed population's workplace address is in a main urban area.

Main Urban Area

Main Urban Areas:

- contain 1.9 percent of New Zealand's land area
- are home to 71.8 percent of the population
- have a population density of 569.8 people per square kilometre
- are the 16 largest urban areas in New Zealand.¹⁷⁹

¹⁷⁹ Main Urban Areas are Whangarei, Auckland, Hamilton, Tauranga, Rotorua, Gisborne, Napier–Hastings, New Plymouth, Wanganui, Palmerston North, Kapiti, Wellington, Nelson, Christchurch, Dunedin and Invercargill.

Glossary

Access to services: The ability of people to obtain health care at the right place and the right time irrespective of income, physical location, cultural background, age or sex.¹⁸⁰

For access to health services to be realised, the health sector must know what the community's needs are and provide services to address those needs. Attitudes towards health needs and services, financial and other costs of accessing services, and past experiences of health services mediate between the 'potential access' represented by available services and the realised access represented by utilisation behaviour.¹⁸¹

Realised access depends on a person's predisposition to seek medical care and the health sector's response in providing services that are:

- affordable – to the person, in terms of fees and in terms of associated costs such as transport, time away from work and childcare
- available – in terms of location, hours and sufficiency of service to meet the need
- accessible – to the person, which requires consideration of how the person will travel to the service, if it is provided some distance away from the person's location
- accommodating – of the person's needs, for example, hours of opening that take account of the person's constraints and preferences
- acceptable – in terms of cultural appropriateness and other matters.¹⁸²

A focus on realised access allows the systemic barriers that contribute to the inequitable uptake of health services between population groups to be identified and addressed. Ensuring equitable realised access to health services is a key requirement in addressing disparities in health status.

Appropriate and accessible support services are also essential for disabled people living in rural areas, some older people, and people whose health conditions limit their independence. These support services also need to be affordable, available, accommodating and acceptable to enable people to remain living and participating in their communities.

Community governance: An approach seeking to ensure the communities served by an organisation have control over key decision-making.

¹⁸⁰ National Rural Health Policy Sub-committee, National Rural Health Alliance. 2002. *Healthy Horizons: A framework for improving the health of rural, regional and remote Australians – Outlook 2003–2007*. Canberra: National Rural Health Policy Sub-committee and National Rural Health Alliance.

¹⁸¹ Goddard and Smith, cited in Health Services Research Centre, Victoria University of Wellington. 2006. *Rural Health: A literature review for the National Health Committee*. Wellington: Victoria University of Wellington.

¹⁸² Penchansky and Thomas, 1981, cited in Laiw S, Kilpatrick S (eds). 2008. *A Textbook of Australian Rural Health*. Canberra: Australian Rural Health Education Network; Raymont A. 2008. *Improving Access to Health Services for Vulnerable Populations: A review of the literature*. Wellington: District Health Boards New Zealand.

Comprehensive primary health care: An approach to primary health care that adheres to the ideas in the World Health Organization's Alma Ata Declaration in acknowledging the importance of not only the range of services indicated under primary health care above, but also the addressing of broader determinants such as housing, sanitation, and education within a framework emphasising community in decision-making.

Disability support services: Ministry of Health-funded services include home-based services such as personal care and home help, residential services, supports for carers in the home and respite services and supported independent living services. Environmental support services, such as equipment and housing and vehicle modifications, are also included.

Kaumātua: An elder identified by the community and acknowledged as having knowledge of tikanga (customs), history and te reo (language). They share this knowledge, teaching and guiding younger generations to maintain the mana (integrity) of the whānau (family), hapū (subtribe) and iwi (tribe).

Kaupapa Māori: By Māori for Māori. It's a fundamental basis in Māori values, experiences and world views drawing on whānau, hapū and iwi organisational systems.

Kōhanga reo: Language nest – preschool.

Kura kaupapa Māori: Māori immersion primary school.

Manaakitanga: Nurturing, support.¹⁸³

Mobile surgical bus: A specially equipped mobile operating theatre in a truck that brings day surgery facilities to small rural hospitals, and a national and international exchange of expertise to larger hospitals.

Point-of-care testing: Diagnostic testing at or near the site of patient care with the primary aim of providing rapid testing for the safety and convenience of patients. It may take place in a hospital or other healthcare centre or off site. Point-of-care testing uses a variety of portable equipment and testing kits to measure bodily function and signs of morbidity. Examples include blood tests (for example, blood glucose and homocysteine – commonly used as a screen for people at high risk for heart attack or stroke), nerve conduction tests, and HIV salivary assay tests.

Primary health care: The Primary Health Care Strategy defines primary health care to cover a broad range of services, although not all of them are government funded, including:

- participation in communities and working with community groups to improve the health of the people in the communities

¹⁸³ Ministry of Health. 2008. *The Whānau Ora Tool*. Wellington: Ministry of Health.

- health improvement and preventive services, such as health education and counselling, disease prevention, and screening
- generalist first-level services, such as GP services, mobile nursing services, community health services, and pharmacy services that include advice as well as medication
- first-level services for certain conditions (such as maternity, family planning and sexual health services, and dentistry) or those using particular therapies (such as physiotherapy, chiropractic and osteopathy services, traditional healers and alternative healers).¹⁸⁴

Rural: A combined category including four of the seven Statistics New Zealand Urban/Rural Profile areas: Highly Rural/Remote Areas, Rural Areas with Low Urban Influence, Independent Urban Areas, and Rural Areas with Moderate Urban Influence. The rural population is the population living in these areas.

Scope of practice: A term registration authorities for various professions use to define the procedures, actions and processes that are permitted by the registered individual. The scope of practice is limited to that which the Health Practitioners Competence Assurance Act 2003 (as at 24 January 2009) allows for specific education and experience, and specific demonstrated competency.

Secondary health services: Health services such as diagnostics and surgery accessed through referral by a primary health care clinician.

Special Medical Area: An area created as a legislated response to the concern that some rural and remote communities should receive ‘no charge at point of need’. In these areas, doctors were salaried and often took health care to patients in far-flung localities. The first area, Hokianga, was established in 1947 after lobbying by pioneering doctor G M Smith.

Tangata whenua: People of the land including whānau, hapū and iwi.

Tertiary health services: Health services accessed through referral by secondary health care providers (for example, supra-regional or national-based services).

Urban: A combined category including three of the seven Statistics New Zealand Urban/Rural Profile areas: Main Urban Areas, Satellite Urban Areas and Rural Areas with High Urban Influence.

Whānau ora: Facilitating positive adaptive relationships with whānau and recognising the interconnectedness of health, education, housing, justice, welfare, employment and lifestyle elements of whānau wellbeing.¹⁸⁵

¹⁸⁴ Minister of Health. 2001. *The Primary Health Care Strategy*. Wellington: Ministry of Health.

¹⁸⁵ Ministry of Health. 2009. *Statement of Intent 2009–2012*. Wellington: Ministry of Health.